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AMERICAN Cinematographer

The Magazine of Motion Picture Photography

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ARTHUR E. GAVIN, Editor

MARION HUTCHINS, Editorial Assistant

CONTRIBUTORS. Herb A Lightman Joseph V Mascelli, Clifford V. Narrington, Joseph Henry, Frederick Foster, Libera Grandi (Rome), Jean Belanger (Paris), Derek Nill (London)

Technical Adviser Dr. Norwood L. Simmons

Editorial and Business Office 1782 North Orange Drive, Hollywood 28, Calif
Telephone HOllywood 7-2135

May, 1961 Vol. 42, No. 5

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AMERICAN CINEMATOGRAPHER, established 1920, is published monthly by the A S C Agency, Inc., 1782 N Orange Dr., Hollywood 28 Calif. SUBSCRIPTION United States and Canada, $4.00 per year; Foreign, including Pan-American Union, $5 00 per year; Single copies 35 cents; back numbers 45 cents; foreign single copies 45 cents, back numbers, 55 cents Advertising rates on application Copyright 1961 by A. S C Agency, Inc Second-class postage paid at Los Angeles, California

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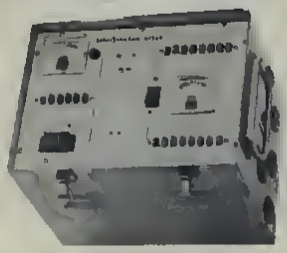

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INDUSTRY NEWS

News briefs of industry activities, products and progress

One-lens Cinemiracle Projection

Cinemiracle Pictures Corp., developers of a super-wide screen process similar to Cinerama, now has perfected a single lens projection system capable of projecting Cinemiracle pictures on to a deeply curved screen without any perceptible distortion for screens up to 50 feet in width The method, which employs a system of mirrors, reportedly projects a single standard 35mm or 70mm image on a deeply-curved screen with excellent results

• • •

Tahiti Film Studio

A modern motion picture studio with complete production facilities is planned for a 10 acre tract near Point Riri in Tahiti. Volz-Rappaport Co., construction-finance firm, has organized the Tahiti Studios Associates there. Partnered in the studio project is Manu Ariiteuira Teriitahi, the Chief of the Papeari, who has played important parts in several Hollywood produced South Seas films.

• • •

Trend Towards 60-min. TV Films

Reflecting the trend toward hour-long TV films as opposed to the 30-minute programmers which have dominated production in the past, is report last month that a record number of 46 hour-long weekly series will occupy prime time next season on all three networks. Even successful half-hour series, such as "Gunsmoke" and "Wells Fargo," are to be expanded to the full hour format next fall

Cinematographers, producers, writers and others are said to welcome the hour-long trend as opening the door to better quality TV film production Already, the producers of the 60-minute series are devoting more than a full work week—sometimes up to 10 days or more—to filming each episode It is probable that as demand for improved quality in TV films continues that hour-long series will eventually go to alternate week or once-a-month telecasting basis.

• • •

Bill Farley Joins W. J. German

Walter (Bill) Farley, for 27 years with Eastman Kodak Co., and in recent years assistant office manager of company's Hollywood office, has joined W J. German, Inc, national distributor of Eastman professional motion picture films Working out of the German Hollywood office, Farley will augment company's sales staff as technical contact man between company and Hollywood film industry.

• • •

Camera Equipment Co. Sold

A group of New York investors, headed by Robert B. Bregman, announced last month completion of arrangements for acquiring the business of Camera Equipment Co, Inc., of New York According to Bregman and Frank Zucker, operations and policies of company will continue in same manner as heretofore, with Mr. Zucker and other members of present management continuing as officers and employees of the acquiring corporation

• • •

High Speed Stereo

Benson-Lehner Corp, Santa Monica, Calif., has received contract from the Naval Weapons Laboratory for the design and manufacture of a high speed stereo camera and projector. Camera is of the rotating-prism type and will be designed to attain its maximum sampling rate of 15,000 fps in 60 feet of a 400-foot film load, after which the sampling rate is constant

Basic picture format is 8x16mm for each one of the stereo pairs Recording is done on 35mm Kodak film having 4-row 8mm perforations.

The interaxial distance will be adjustable from 13 inches through 4 feet to provide stereo from 15 feet to infinity.

• • •

News Briefs:

Robert Pell has been appointed sales manager of Byron Motion Pictures, Inc, Washington, D.C . . . *Burns & Sawyer*, Hollywood, will acquire the property of KCOP in Hollywood and will convert it to a sound stage rental facility catering to small film producers. . . *Kling Photo Corp.*, importer-distributor of West German photographic products including the Arriflex cameras, held open-house April 23rd at company's newly-acquired Hollywood headquarters at 826 No. Cole Avenue. e

NEW MITCHELL R-35

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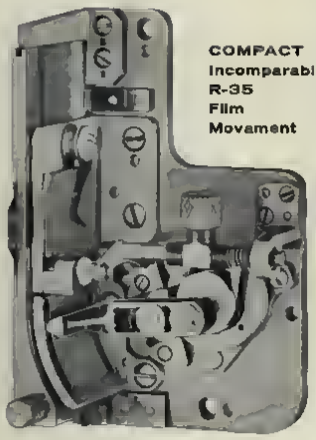
Designed to cover the widest range of professional motion picture applications, the all new Mitchell R-35 reflex camera offers remarkable versatility to exceed the requirements of most discriminating cinematographers. Streamlined design is combined for the first time with the full range of professional features by Mitchell—world's leading source of truly professional motion picture cameras and equipment.



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Hand Held or Tripod Mounted, the new Mitchell R-35 reflex camera uses a new series of Super Baltar matched lenses designed specifically for the R-35 by Bausch & Lomb For Complete details of the outstanding features of this remarkable 35mm camera, write for the new R-35 Bulletin.

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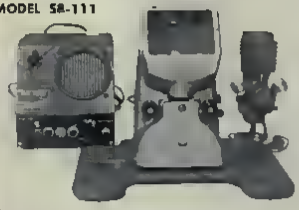

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Wm. Daniels Named President Of The A.S.C. For 1961-62

Sol Halprin, Milton Krasner, Joe Ruttenberg, Vice-presidents.

WILLIAM DANIELS
President-elect of American Society of Cinematographers.

WILLIAM DANIELS, one of the industry's top flight directors of photography, last month was elected President of the American Society of Cinematographers. A member of the Society since 1932, Daniels has served at various times on the Society's Board of Directors and had been elected 2nd Vice-president in 1960

Several years ago, when MGM maintained a number of cinematographers under contract, William Daniels was one of the studio's ace directors of photography and became Greta Garbo's exclusive cameraman Daniels photographed all of Garbo's pictures but two during her reign as star on the MGM lot. He also was a favorite of Norma Shearer, and photographed such top MGM stars as Clarke Gable, Jimmy Stewart, and June Alyson. He was the first Hollywood cinematographer to establish a reputation as a "glamourizer" of fem stars

Today, he is Frank Sinatra's favorite director of photography and has photographed Sinatra's last four productions—"Can Can," "Some Came Running," "Hole In The Head," and "Oceans 11." In Sinatra's upcoming production, as yet untitled, Daniels will serve as co-producer as well as director of photography.

Daniels has numerous Academy Award Nominations to his credit, and has received one Oscar to date—for the photography of "Naked City," a picture now renowned for its unusual documentary style black-and-white photography He received a Georgr Eastman Award in 1957. and was cited in 1956 by the trade paper *Film Daily* for the photography of Paramount's "Strategic Air Command."

As a director of photography, Daniels always strives to avoid "formula photography" or too spectacularly individualistic style No two of his pictures will have the same photographic treatment, yet they will possess many of Daniels' deft touches which. when added together, result in a significant photographic job His photography of "Can Can" is an example of this.

For months he's been planning the photography of MGM's upcoming "Lady L," in which Gina Lollobrigida is to star Because the story especially emphasizes Lady L's delicate "peaches and cream" complexion, Daniels has been conducting extensive experiments with makeup and screen-testing the star in order to achieve the desired delicate result in the photography. which will be in color The tests will be the subject of an article by Daniels in a future issue of *American Cinematographer*

Other Officers Elected

Other officers elected with William Daniels were Sol Halprin, 1st Vice-president; Milton Krasner, 2nd Vice-president; Joseph Ruttenberg, 3rd Vice-president; Charles G. Clarke, Treasurer; Ray Rennahan, Secretary; and Daniel Fapp, Sergeant-at-Arms.

Robert deGrasse, Arthur Miller, and Hal Mohr were elected to the ASC's Board of Directors, which also includes Arthur Edeson, Burnett Guffey, Victor Milner, Harold Rosson, and John Seitz.

Alternate Board Members elected are: Ernest Laszlo, James Van Trees, Wallace Kelley, Ellis Carter, Harold Lipstein, John Arnold, Paul Vogel, Paul Eagler. Charles Salerno, and Gilbert Warrenton. ■

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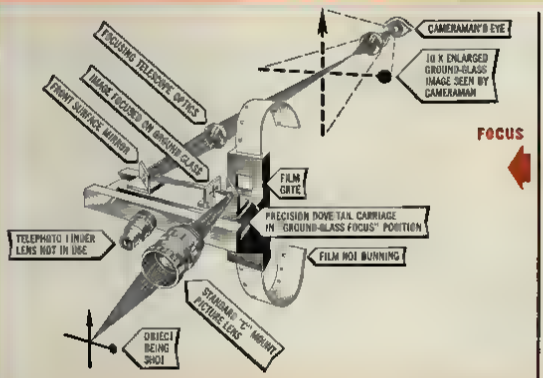
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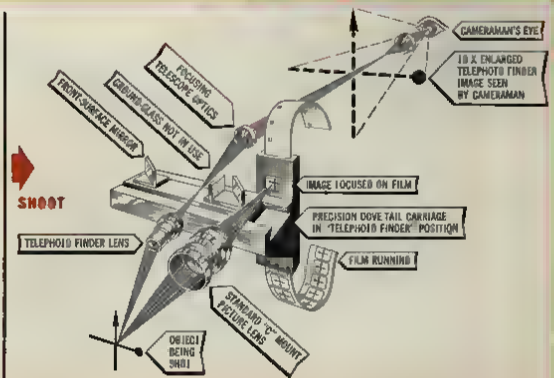

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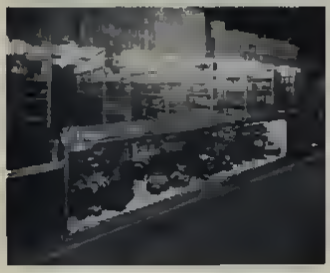

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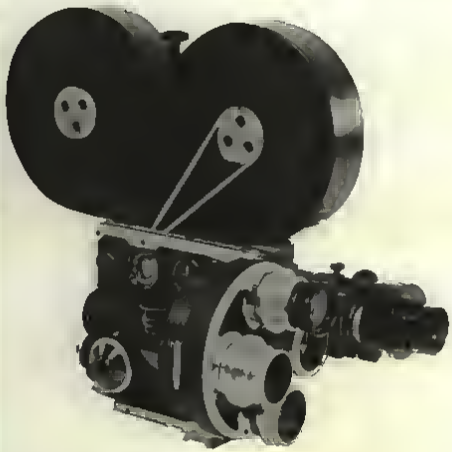

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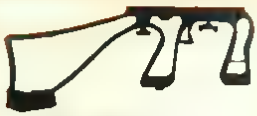

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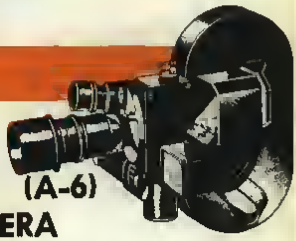

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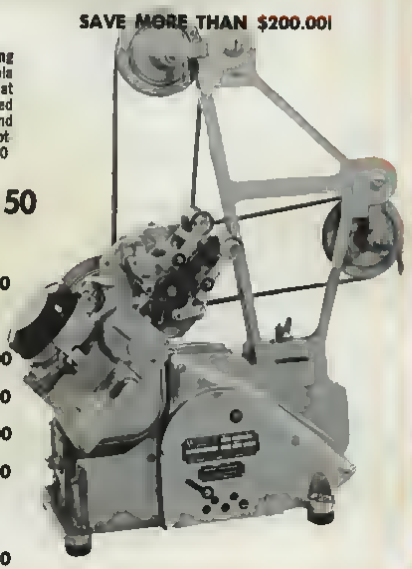
Model D 35mm

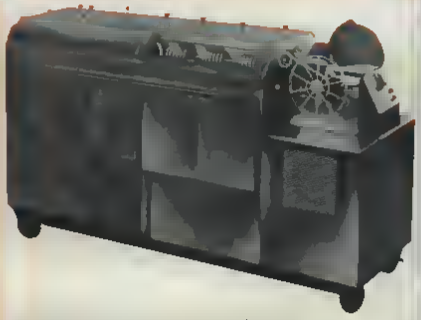
SAVE MORE THAN $200.00!

Features a large 3-inch diameter viewing lens. Reversible, foot controlled variable speed motor. Can also be hand braked at winding flange. Film can remain stopped as long as desired. Includes take-up and supply spindles. Comes with case and foot switch. Takes 10 inch (1000 ft.) reels 100 120 volt 25-60 cycle

SPECIAL PRICE **189.50**



Model L — 16mm version of Model D	295.00
Model UDS — 35mm picture head and optical sound. 3" viewing lens. Stand, motor and reel spindles.	595.00
Model UDS-Mag — Same as UDS, with magnetic sound pick-up	695.00
Model UD2S — Same as UDS but with 2 sound heads	750.00
Model UD4S — Same as UDS but with 4 sound heads	995.00
Model SC — 35mm Projector. Has projection head with composite 35mm optical sound. Separate head for 35mm optical, mag. or ¼" tape	795.00



HOUSTON FILM PROCESSORS

Model K-2 — 16mm Negative and Positive	695.00
Pump and Compressor for Model K-2	150.00
Model K-1A — 16mm Neg., Pos., Reversal	1595.00
Model K-3 — 16mm Neg., Pos., Reversal	1795.00
Model K-3A — 16mm Neg., Pos., Reversal	2450.00
Model A-11 — 16/35mm Neg., Pos., Reversal	2750.00
Labmaster — 16/35mm, Negative, Positive	3250.00
Color — 16mm Reversal Color Film	8950.00

HOLLYWOOD CAME

AURICON
SOUND-ON-FILM RECORDER

Model 20 16mm x 200 ft. capacity. Complete with synch motor, galvanometer, Model HR 25 noise reducing amplifier, mike, cables, headset, blimped case, etc COMPLETE! Can be used in conjunction with any camera to form complete Dual Sound System.

SPECIAL..... 395.00

16mm x 400 foot
MAGAZINES
for BELL & HOWELL CAMERAS
List is $195.00
Brand New!
129.50

16mm x 400' for Mitchell 16	92.50*
16mm x 200' Cine Special Chamber	295.00
16mm x 400' Cine Special Chamber	355.00
16mm x 100' Cine Special Chamber	125.00
16mm x 400' Maumr	145.00
16mm x 400' Eclair Cameretta	175.00
35mm x 200' Bell & Howell (Metal)	47.50
35mm x 400' Bell & Howell (Film)	19.95
35mm x 400' Bell & Howell (Metal)	54.50
35mm x 1000' Bell & Howell (Metal)	95.00*
35mm x 400' Mitchell Magazines	59.00
35mm x 400' Mitchell Magazines (Bi-Pack)	235.00
35mm x 1000' Mitchell Magazines	99.00
35mm x 2000' Mitchell Magazines	235.00
35mm x 400' For Bell & Howell Model 170 (A6)	89.00
35mm x 1000' For Bell & Howell Model 170 (A6)	115.00
35mm x 400' Wall Magazines	54.50
35mm x 1000' Wall Magazines	95.00*
35mm x 200' Arriflex (Conversion)	69.50*
35mm x 400' Arriflex (Conversion)	119.00*
35mm x 100' Eclair Camamtta Magazines	85.00

* NEW — Items not starred are excellent, used, guaranteed serviceable.

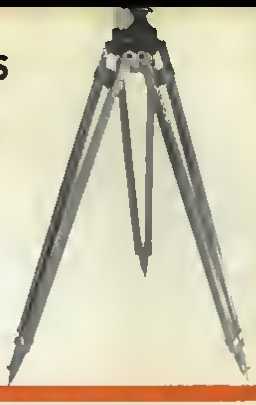
HOLLYCAM
JUNIOR TRIPODS

Hollycam Tripod with Vee-Grooved legs and friction head. Height adjusts from 52" to 71". Large camera plate for even the heaviest 16mm cameras. Smooth pan and tilt.

NOW ONLY

BRAND NEW 124.95

Junior legs only 80.00
Junior head only 90.00
For ball leveling socket and adapter, add 42.52



HERNFELD 35mm PRINTER

35mm continuous motion picture printer, Model 1509A. Makes contact prints on 35mm positive film. Sprocket driven operation up to 60 feet per minute. Includes light source, optical system, light change mechanism, five-way aperture, light card indicator, sprocket drive, motor, clutch and footage indicator. 750 watt mad pin-focus lamp INCLUDED is automatic color-correction filter changer for scene-to scene color correction. Slide magazine holds up to 75 filters and is solenoid operated.

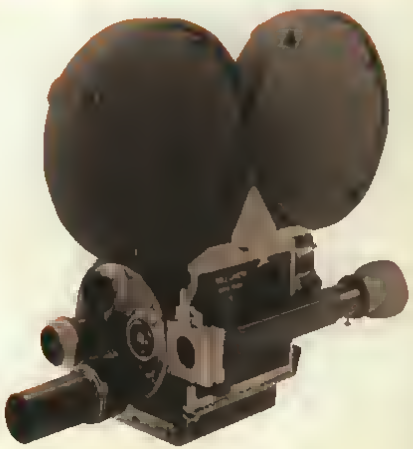
LIST PRICE IS $4250.00

Our Price 1250.00

ALSO AVAILABLE
Arri 35mm Step Printer with light changer 1475.00
Houston C-4 16mm Continuous Printer 495.00
Schustek 16/35mm Reduction Printer 750.00

Famous **WALL 35mm**
Single-System Sound Camera With Mitchell Type Rackover and Registration Pin Movement

Standard with professionals everywhere. Proven with a background of over 31 years of successful operation under every climatic condition. Rugged and dependable. Records optical sound directly on the negative simultaneously with the picture. Through-the-lens focusing. Four-lens turret with locking mechanism. 170° variable shutter with dissolve. Mitchell type viewfinder. Pilot pin movement. Many, many other features.



WALL 35mm CAMERA with sound system, recording galvanometer and amplifier, cables, controls, two magazines, rackover, AND FOUR LENSES . . . MOTOR, CASES.

COMPLETE 1995.00

Same as above but less sound equipment, with 12 volt motor..... 1250.00

4 CO.

10611 CHANDLER BLVD., NORTH HOLLYWOOD, CALIFORNIA

MITCHELL CAMERAS

COMPLETE 35mm HI-SPEED OUTFIT

Based on the proven design of the Mitchell "Standard," the Hi-Speed operates at speeds from 1 to 128 frames per second. Perfect results are assured at all intermediate speeds. Unequalled for slow motion photography. Design is identical to the "Standard," except that ball bearings and only high quality metal gears are used.

List Value is $8150.00

With 4 lenses, mattebox, viewfinder, motor, two 400 ft. magazines, and set of carrying cases. 3550.00

Hollycam Special

head only **2495.00**

MITCHELL ACCESSORIES

1" f2.3 Bausch & Lomb Baltar	130.00
2" f2.3 Bausch & Lomb Baltar	135.00
3" f2.3 Bausch & Lomb Baltar	140.00
4" f2.3 Bausch & Lomb Baltar	165.00
6" f2.3 Bausch & Lomb Baltar	190.00
35mm Tripod Legs, Standard, New	139.50
35mm Tripod Legs, Standard, Used	99.50
Friction Head, Standard	395.00
Standard Finder with insert mattes	179.50
Standard Finder with Adjustable Mattes	295.00
Motor — 110 volt, "wild"	395.00
Motor — 12 volt d.c. with techometer	295.00
Motor — 24 volt d.c. with techometer	295.00
Motor — 110 volt synch. for 16mm camara	297.50
BHC Interlock Motor—110 or 220 volt	195.00
Single System Motor—12 or 24 v. d.c.	285.00
Filter Holders—12, with case. New	17.00
BNC Selsyn remote follow-focus control	275.00
Variable Diffuser, New	110.00

MITCHELL CAMERAS

Mitchell Single Lens Camera with head and motor	1295.00
Mitchell Single System with RCA galvanometer and completa RCA sound recording system. Reconditioned, guaranteed equal to new	6750.00
Mitchell Standard with 6 lenses, mattebox, viewfinder, motor, four 1000 ft magazines and set of carrying cases. $8650.00 list	3550.00
Mitchell Standerd, Head Only	2495.00

Bell & Howell Eyemo 'Q'

An outstanding value!

Designed and built for rugged duty. One of the most versatile cameras ever made. Speeds of 8, 12, 16, 24, 32 and 48 frames per second. Quick-reading footage counter. Camera holds 100 ft. of film in daylight spools, or 400 ft. with magazines.

YOU GET ALL THIS:
3 lens spider turret
1" Bell & Howell lens
2" Bell & Howell lens
6" Bell & Howell lens
Motor mount
New Eyemo motor
Hand crank
Magazine drive belt
Filters & sunshades
Power cable
Two 400' magazines
Open back for magazines
Drum type optical finder with fields for 6 lenses

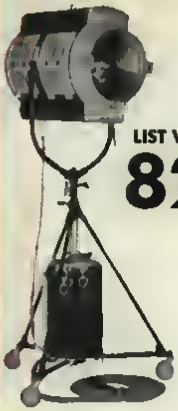
LIST VALUE $1800

395.00

Write for list of optional accessories such as critical focusers, filter slots, cases, etc.

120 amp Mole-Richardson MOLARC 90 ARC LIGHT

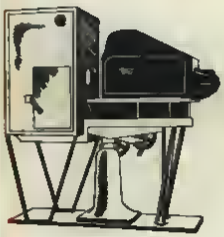
Beam is variable from 6° to 44° without hot-spots. Adaptable to all types of lighting where spot or flood illumination is required. With barndoors and diffusion frame.



LIST VALUE $1300

825.00

Teague 35mm Motion Picture BACKGROUND PROJECTOR



Complete 35mm background process projector on heavy-duty adjustable pedestal with tie downs, rotary distributor, Bell & Howell dual pilot pin registration movement, motor and magazines. Projector is completely blimped. Optical system includes lens, condensers, and shutter. Projector and camera can be interlocked or run "wild." 180 amp Pearless High Intensity Rotary Arc.

List Value is $18,000.00!

COMPLETE, READY TO OPERATE

3850.00

All equipment is guaranteed to be as advertised. Check with order please, or 25% deposit, balance on delivery. Purchase orders welcomed from D&B rated firms. Minimum order $5.00. All prices f.o.b. our warehouse.

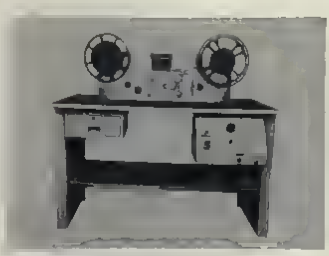
Write for your copy of our new catalog, showing hundreds of items for still, cine, and aerial photography. Large section on processing equipment.

HOLLYWOOD CAMERA CO.

10611 CHANDLER BLVD., NORTH HOLLYWOOD, CALIFORNIA

WHAT'S NEW

IN EQUIPMENT, ACCESSORIES, SERVICES



High-Speed Editing Table

Camera Equipment Co., Inc., 315 West 43rd St., New York, N. Y., announces a new high-speed editing table for rapid film scanning. Said to be ideally suited to television stations and film libraries where rapid inspection of prints, insert spots and commercials are required before release, the CECO Editing Table features rapid, scratch-free operation at speeds up to 250 ft. per minute, both forward and reverse. Also provided is ability to stop film action on any single frame without damaging the film. Brightly illuminated screen is 4"x6", and there are also a footage counter, optical sound head, speaker, amplifier and manual controls for both film speed and sound. Price of 16mm model is $2,500; the 35mm model, $1,750.00.

Explosion-Proof Lamp

Natural Lighting Corp., 630 So. Flower St., Burbank, Calif., announces a new ColorTran explosion-proof lighting unit (pictured below), which is designed for use in dangerous test areas or other hazardous environments. Taking standard PAR 64 lamps and operating in confined areas, the 12-lb. 10-in. lamp provides usable photographic light equal to a conventional 5000-watt studio key light when controlled by a ColorTran Converter. List price is $120.00.

D.C. Power Source

Gordon Enterprises, Inc., 5362 No. Cahuenga Blvd., North Hollywood, Calif., announces the Dynamax Power Pack, a nickel-cadmium battery having 6- to 10-hour capacity and capable of repeated re-charging. It is available with 12- and 24-volt outputs and there is a dual pack for use with Arriflex cameras that supplies either 8 or 17 volts power. The complete unit is mounted in a leather carrying case for over-the-shoulder use. Available also is the Dynamax Charger as a companion unit. This operates on 115-volts A.C. and will fully charge the Dynamax power pack overnight.

Automatic Exposure Control

Flight Research, Inc., P.O. Box 1-F, Richmond, Va., announces the Model VI-4 Autex continuous automatic exposure control for cameras used for photoinstrumentation. Features of this new model include simpler method of matching control to the iris diaphragm of any lens, internal limit switches, and removable photocell for remote locations.

Designed to be mounted on any motion picture camera and to drive the iris ring of the lens, the unit's high-speed mechanism responds to light level changes as fast as 7 stops per second. The unit's small size and small weight makes it ideal for airborne installations and underwater housings. Simple index dial adjusts control for all film speeds. A lens dial adaptes the control electronically to the lens.

TIGHT BUDGET?
RENT
CAMERA LENSES

Now! If you are working on a tight budget, but want to make a tremendous showing at a small outlay . . . your T.V. station can RENT the World's finest Lenses from B & J. Extensive selection! Off-the-Shelf Delivery! Pioneers in T.V. Optics—since 1936!

TV and CINE OPTICS UNLIMITED!!

For Color — Black and White

Choice of Focal lengths, Apertures, and Speeds direct FROM S S J STOCK, or Special Custom Fittings from S & J's Modern Lens Lab. S & J is prepared to meet the most exacting needs of your TV Stations NOW. Widest selection of Cine Lenses — 16mm (Pathe, Filmo, Bolex, etc.) and 35mm (Eyemo - Mitchell) —Normal, Wide-Angle, Telephoto, Zoom!

Write for Special 8 page Optics & Accessories Listing FREE — 132 pg. catalog of Photo Equipment, Lenses and Accessories, for the Professional!

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QUALITY AND SERVICE
16MM
BLACK & WHITE
REVERSAL NEGATIVE
POSITIVE PRINTING
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COLOR PRINTING

Work prints—Timed Prints
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From original photography to release prints, skilled CFI technicians accurately interpret the creative objectives of the cinematographer. Exacting CFI laboratory control and advanced processing methods insure maximum definition and correct tone reproduction... consistently.

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COMPLETE 35MM AND 16MM FILM SERVICES

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ANIMATION at F & B

In a short but hectic space of 3 years, F & B has emerged as one of the leading suppliers of animation equipment to suit every purpose. F & B is deeply interested in the problems facing film producers and all of these products have been developed only after much discussion, consultation and research. All stands are custom built and virtually every stand delivered has contained adaptations and modifications worked out to best meet the individual buyers requirements.

F & B Triplex ANIMATION STAND

The undisputed performance champion in the low-priced animation stand field.

Basic Stand $995

It's an
- Animation Stand
- Filmstrip Stand
- Product Stage
- Tilting Stand

Compare these specifications.
- Zoom Range 1-30 Field
- Compound Camera Carriage 18" E-W, 12" N-S
- Tracking Accurate to 1/1000 of an Inch

Weight 450 lbs. 14 Accessories Available

NEW INDUSTRIAL & AV ANIMATION STAND

A complete professional animation unit for the industrial or school studio in a package

Specifications: 60" zoom — manual wheel 1/2" per rev — 1-18 field — ground steel 2" columns — welded steel base. **Camera carriage** interchangeable for movies, stills, enlarging, copying, projection. Capacity 70 lbs. **Compound** — NSEW movement driven by lead screws with hand cranks — NS 14" — EW 16" — 1/10" counters on all cranks. **Table Top**—18" x 24"—2 peg bars—24" movement, 1/20" scale 360° rotation with 1/2° scale. Spring-loaded platen with self-leveling water white glass. **Pantograph** — attached, right side up. **Underneath Light Box** —with 4 sockets—opal glass. **Shadowboard**—on single post swivel. **Tap Light Bracket.**

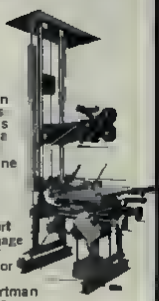
Accessories available include motorized zoom, floating peg bars, dovetail camera mount, 4 x 5 copying and enlarging head

Write For Brochure

$2850

Complete unit as shown

PORTMAN ANIMATION STAND



More than 45 accessories available including
- Multi-Plane Table
- Traverse Peg Bar
- 12 Field Crawl Unit
- Aerial Image Projector
- Stop Motor Motor
- Acme Portman Rack-over, 16mm-35mm Camera

Our new streamlined design incorporates all the versatility of stands costing twice as much. Enthusiastic users from Australia to Venezuela endorse its rugged simplicity and efficiency.

Basic Stand $1595

WRITE FOR COMPLETE 20 PAGE CATALOG

ACCESSORIES

MULTI-PLANE TABLE

for 3 dimensional animation—4 levels optically flat water white glass—24" x 33" x 1/4" Each level independently adjustable—slides freely on rails. Stops provided on each level.

Price $570 —Tape-on peg bars $12

TRAVERSE PEG BAR

allows cells to travel diagonally to table top peg tracks. Travel 16" or longer on special order. Ground steel track with hand crank & counters in 1/100 inch.

Price $195

DRAWING DISK

Aluminum with 3 top and bottom pegs—9" x 12" cutout with frosted glass insert, outside diameter 17"—rotates.

Also available with moveable pegs

Price $45

UNDER-NEATH LIGHT BOX

5 light sockets, motorized blower, opal glass. Evenly illuminates a full 12 field.

Price $95

REGISTRATION PUNCH. 3 punches on 4" centers. Standard peg sizes—Acme or Signal Corps. Tool steel dies will punch thru 1/8" cardboard. Two locating pegs for continuous punching, positive back stop, adjustable side stop. Spring loaded lever handle. 9" x 12" mahogany shelf. $295

Other Accessories Available or Custom-built To Your Requirements:

- Zoom counters & scales
- Shadow boards
- Motorized zooms
- Lens mount
- Automatic follow-focus
- Dovetail camera mount
- Universal light brackets
- Slip lens units
- Multi-plane table
- Artwork tables
- Copying camera
- Automatic field size light units
- Wipe & ripple units
- Peg bars
- Peg plates
- Peg inking boards
- Peg sets
- Compounds
- Table tops
- Peg tracks
- Rotary compound movement
- Double rotary movement
- Platens
- Pantograph
- Fixed floating pegs
- Floating unit
- Floating peg bar
- 12 field crawl unit
- Compound sub-bases
- Snap-on peg plate
- Electric platens
- Wide screen platen glass
- Aerial image projector
- Interchangeable 16-35mm Animation Camera
- Automatic disolve
- Automatic magazine take up
- Single speed & 3-speed stop-motion motors

Please send me detailed information and prices on:

_____ F & B Triplex
_____ Portman Stand
_____ New F & B Industrial Stand
_____ Accessories

Name _____

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MAGIC MYLAR
A New Splicing and Repairing Technique

NOW IN NEW 20 FT. ROLLS!

only $2.20 for 16mm
$4.04 for 35mm

REPAIR Torn, damaged films & film strips, patch cuts, tears, gouges, necks, burns, etc.

REPLACE Torn perforations — on sound or silent films & film stripe — missing pieces of film — restore torn-out bits of film —

BUTT SPLICE without losing a single frame of your film strip or 16mm movie film—butt splice leaders and tails — no cement or splicers needed —

STRENGTHEN OVERLAP SPLICES
Placing a frame of Magic Mylar over your regular over-lap splice absolutely prevents it from ever opening —

Use Magic Mylar white opaque tape for splicing magnetic film—or for visible splices in darkroom processing

Florman & Babb, Inc.
68 W. 45th St., N.Y. 36, N.Y.

Please send me.

- ☐ 20 ft. rolls — transparent 16mm — single perforation (T16S) at $2.20
- ☐ 66 ft. rolls — transparent 16mm — single perforation (T16S) at $6.00
- ☐ 20 ft. rolls — transparent 16mm — double perforation (T16D) at $2.20
- ☐ 66 ft. rolls — transparent 16mm — double perforation (T16D) at $6.00
- ☐ 20 ft. rolls — transparent 35mm (T-35) at $4.04
- ☐ 66 ft. rolls — transparent 35mm (T-35) at $11.00
- ☐ 66 ft. rolls — white opaque — 16mm — magnetic film only (0-16) at $6.00
- ☐ 66 ft. rolls — white opaque — 35mm (0-35) at $11.00
- ☐ ¼" splicing tape for magnetic tape ($4) at $.57

SPECIAL INTRODUCTORY KIT:

1 20' roll T16 ($2.20)
1 20' roll T35 (4.04)
F & B Film Repair & Butt Splice Block (19.95)
($26.15)

☐ Special Introductory Kits at only $14.50

Name ...
Address ...
City ...

PHOTOGRAPHIC ASSIGNMENTS

WHAT THE INDUSTRY'S CAMERAMEN WERE SHOOTING LAST MONTH

By MARION HUTCHINS

NOTE—Asterisks indicate television film productions.

AMERICAN INTERNATIONAL

MIGUEL F. MILA, "Atlantic Attack" (Color; Spain) with Broderick Crawford and Maria Cabre. Charles Haas, director.

CASCADE STUDIO

ROY SEAWRIGHT, Commercials*

HENRY SHARP, ASC Commercials*.

COLUMBIA STUDIOS

FRED GATELY, ASC, "Manhunt"*

IRVING LIPPMAN, "Naked City"*

JOE BIROC, ASC "Jack Carson Show"* (Pilot)

CHARLES LAWTON, ASC, Commercials*

GERT ANDERSEN, ASC, "Donna Reed Show"*

JACK MARTA, "Route 66"*

CHARLES WELDON, "Dennis the Menace"*

JOHN WILMBOLT, "The Hellions" (Technirama & Technicolor, Irving Allen, Ltd., shooting in S. Africa) with Richard Todd and Lionel Jeffries. Kenneth Annakin, director

GUISSEPPE ROTUNNO, "Two Enemies" (Dino de Laurentiis Prods.; shooting in Israel) with David Niven and Albert Sordi. Guy Hamilton, director.

GORDON AVIL, ASC, "Underwater City" (Fantascope & Color. Neptune Prods.) with William Lundigan and Julie Adams. Frank McDonald, director

CARL GUTHRIE, ASC, "Everything's Ducky" with Mickey Rooney and Buddy Hackett. Don Taylor, director

DESILU—Cahuenga

LOTHROP WORTH, ASC, "The Real McCoy's"*

DESILU—Gower

ROBERT PLANCK, ASC, "My Three Sons"*

LUCIEN ANDRIOT, ASC, "Harrigan and Son"*

GENERAL SERVICE STUDIOS

PHILIP LATHROP, ASC, "Perry Mason"*

ROBERT MORENO, "Adventures of Ozzie and Harriet"*

MAURY GERTSMAN, ASC, "Mr. Ed"*

INDEPENDENT

RICARDO TORRE, "The Magic Fountain" (C-Scope & Eastman color; shooting in Madrid) with Fernando Lamas and Esther Williams. Fernando Lamas, director

ALEX PHILLIPS, "Geronimo" (Panavision & Technicolor, Levy-Gardner-Laven Prod. for UA) with Chuck Connors and Kamala Devi. Arnold Laven, director.

GILBERT WARRENTON, ASC, "Beauty and the Beast" (Technicolor; Edw. Small Harvard Film Corp. UA) with Joyce Taylor and Mark Damon. Edw. L. Cahn, director.

ELWOOD J. NICHOLSON, "The Phantom Planet" (Four Crown Prods., shooting at Producers Studio) with Dean Fredricks and Coleen Gray. Bill Marshall, director.

PAUL BEASON, "Once a Thief" (Hartford Prods. for UA; shooting in Madrid) with Rex Harrison and Rita Hayworth. George Marshall, director

ERNEST LASZLO, ASC, "Judgment at Nuremberg" (Stanley Kramer Prods. for UA release) with Spencer Tracy and Burt Lancaster. Stanley Kremer, director.

ROBERT KRASKER, "El Cid" (Super Technirama-70, Samuel Bronston Prods. with D.E.A.R., Films for Allied Artists & J. Arthur Rank, shooting in Spain) with Charlton Heston and Sophia Loren. Anthony Mann, director

MARIO MONTUORI, "Last Days of Sodom and Gomarrah" (Embassy Pictures-Titanus; Eastman color; shooting in Morocco) with Stewart Granger and Pier Angeli. Robert Aldrich, director

JERRY FAIRBANKS STUDIO

RAY FOSTER, ASC, Commercials*

METRO-GOLDWYN-MAYER

JACK SWAIN, "The Guaslingers"*

JOHN NICHOLAUS, "Rawhide"*

ERWIN HILLIER, "A Matter of Who" (Walter Shenson-Milton Holmes Prod.; shooting in London) with Terry Thomas and Sonja Ziemann. Don Chaffey, director.

JOSEPH LASHELLE, ASC, "The Honeymoon Machine" (Avon Prod., color) with Steve McQueen and Brigid Bazlen. Richard Thorpe, director

PAUL IVANO, "The Jim Backus Show"*

GEORGE CLEMENS, ASC, "Twilight Zone"*

MILTON KRASNER, ASC, "Four Horsemen of the Apocalypse" (C'Scope & Color; Julian Blaustein Prod.), with Glenn Ford and Ingrid Thulin. Vincente Minnelli, director

ROBERT SURTEES, ASC, "Mutiny on the Bounty" (Ultra Panavision & Color, shooting in Tahiti, Arcola Prods.) with Marlon Brando and Trevor Howard. Lewis Milestone, director.

DALE DEVERMAN, "Asphalt Jungle"*

HARKNESS SMITH, "The Americans"*

NBC

ALAN STENSVOLD, ASC, "Dinah Shore Show"; "Groucho Marx Show", "Roy Rogers Show"

PARAMOUNT STUDIOS

RUSSELL HARLAN, ASC, "Hatari!" (Howard Hawks Prod., Technicolor, shooting in Africa) with John Wayne and Gerard Blain. Howard Hawks, producer-director.

Continued on Page 275

THE LUCKY NUMBER

JU 6-1420

that gets the show on the road!

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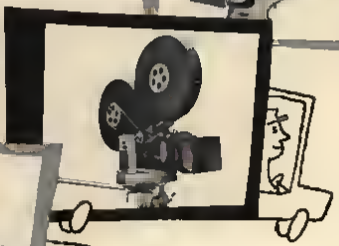

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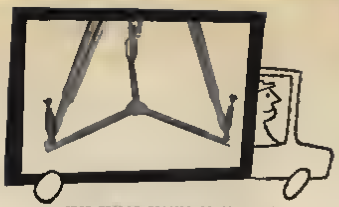

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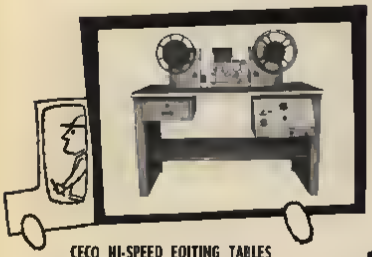

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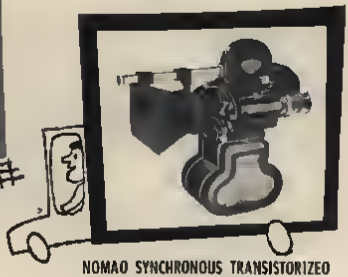

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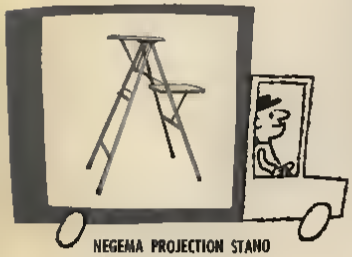

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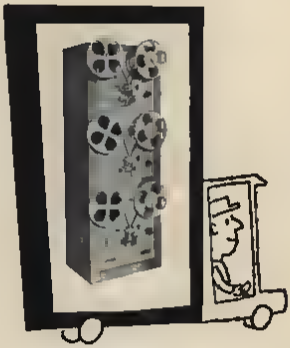

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PHOTOGRAPHIC ASSIGNMENTS

Continued from Page 274

PARAMOUNT STUDIOS

SHUNICHIRO NAKAO, "My Geisha" (Soschiko Prod., Technicolor, shooting in Japan) with Shirley MacLaine and Yves Montand Jack Cardiff, director

LOYAL GRIGGS, ASC, "Deadlock" (Edmond O'Brien Stanley Frazen Tiger Prods.) with Jeffrey Hunter and Stella Stevens Edmond O'Brien, producer-director

PARAMOUNT SUNSET STUDIOS

LESTER SHORR, ASC, "Pete and Gladys"*

REPUBLIC STUDIOS

GEORGE DISKANT, ASC, "The Law and Mr Jones"*

KIT CARSON, "Dick Powell's Zane Grey Theatre"*

CHARLES BURKE, "The Tom Ewell Show"*

WILFRID CLINE, ASC, "Stagecoach West"**

REVUE STUDIOS

SAM LEAVITT, ASC, "Cape Fear" (Melville Prods.) with Gregory Peck and Robert Mitchum J Lee Thompson, director

JOHN RUSSELL, ASC, BENJAMIN KLINE, ASC, "Thriller"*

ELLIS THACKERY ACS, EMIL HARRIS, "Westinghouse Playhouse"*

RAY FLIN, ROBERT GOUGH, "Wells Fargo"*

BENJAMIN KLINE, ASC, JOHN RUSSELL, ASC, "Checkmate"*

JOHN WARREN, ASC, JACK MACKENZIE, ASC, "Holiday Lodge"*

MACK STENGLER, ASC, "Leave it to Beaver"*

JOHN WARREN, ASC, NEAL BECKNER, 'Alfred Hitchcock Presents"*

ELLIS THACKERY, ASC, 'Bachelor Father"*

JOHN WARREN, ASC, "General Electric Theatre"*

RUSSELL METTY, ASC, "Flower Drum Song" (Panovision, Ross Hunter Prod.) with Nancy Kwan and James Shigeta. Henry Koster, director.

WALTER STRENGE, ASC, "Wagon Train"*

RAY RENNAHAN, ASC, "Laramie"*

EMIL HARRIS, "Bringing Up Buddy"*

TWENTIETH CENTURY-FOX

ELLIS CARTER, ASC, "A Star in the West" (C'Scope & DeLuxe color) with Debbie Reynolds and Ken Scott Vincent Sherman, director.

DANIEL FAPP, ASC, "Bachelor Flat" (C'Scope & DeLuxe color) with Richard Beymer and Tuesday Weld Frank Tashlin, director

LLOYD AHLRN, ASC, "Adventures in Paradise"*

N SHIFTON, "Sin of Angels" (C'Scope, Rossen Enl., shooting in N Y) with Paul Newman and Jackie Gleason Robert Rossen, producer director

FRED E FRANCIS, "The Innocents" (C'Scope England Achilles Film Prod.) with Deborrah Kerr and Megs Jenkins Jack Clayton, director

BRYDON BAKER, "20,000 Eyes" (C'Scope, API) with Gene Nelson and Merry Anders. Jack Leewood, director

FLOYD CROSBY, ASC, "The Two Little Bears" (C'Scope, API) with Eddie Albert and Jane Wyatt. Randall F. Hood, director

LUCIEN BALLARD, ASC, "Marines, Let's Go!" (C'Scope & Color, shooting in Japan)

WALT DISNEY STUDIOS

EDWARD COLMAN, ASC, "Babes in Toyland" with Ray Bolger and Tommy Sands Jack Donohue, director

WARNER BROS

ROBERT BURKS, ASC, "The Music Man" (Technirama & Technicolor) with Robert Preston and Shirley Jones Morton DaCosta, producer director

BERT GLENNON, "Lad A Dog" with Peggy McCay and Peter Breck. Aram Avakian, director

JACK MARQUETTE, "Maverick"*

GLEN MACWILLIAMS, ASC, HAROLD STINE, ASC, RAY FERNSTROM ASC, "Roaring Twenties"*

RALPH WOOLSEY, ASC, BURT GLENNON, "Lawman"*

ROBERT TOBEY, ASC, RALPH WOOLSEY, ASC, LEWIS JENNINGS, "Surfside 6"*

RAY FERNSTROM, ASC, LEWIS JENNINGS, ROBERT TOBEY, ASC, HAROLD STINE, ASC, JACK MARQUETTE, "Hawaiian Eye"*

ROBERT HOFFMAN, 'Cheyenne"*

GLEN MACWILLIAMS, ASC, ROBERT HOFFMAN, '77 Sunset Strip"*

HARRY STRADLING, ASC, "A Majority of One" (Mervyn LeRoy Prod.) with Rosalind Russell and Alec Guinness. Mervyn LeRoy, producer-director

HARRY WAXMAN, "The Roman Spring of Mrs. Stone" (Color, AA Prod., shooting in London) with Vivian Leigh and Warren Beatty Joe Quintero, director

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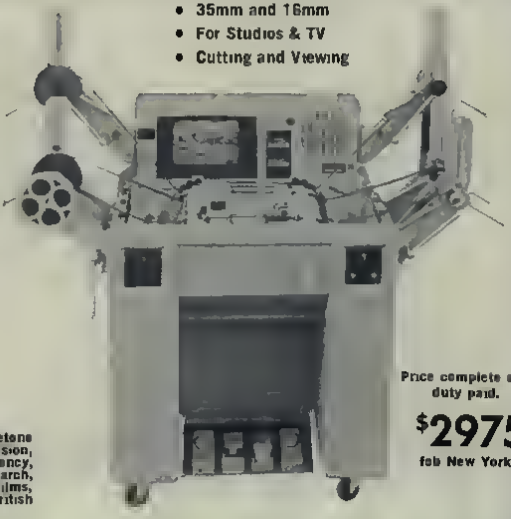

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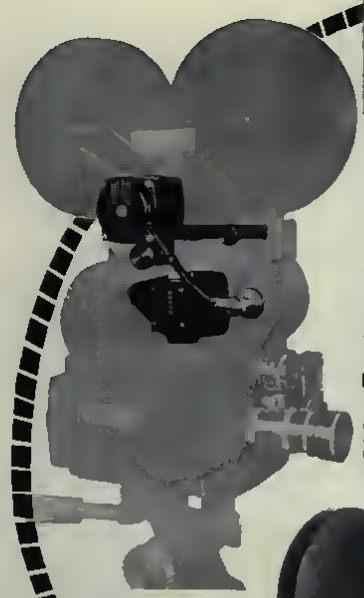

AURICONVERSION* (left) with 400-ft. magazine on Auricon Cine-Voice Camera

1200-ft AURICONVERSION* on Auricon Cine-Voice Camera (right).

400-ft AURICONVERSION* on Auricon Pro-200 Camera (left)

AURICONVERSION* (left) with 1200-ft magazine on Auricon Pro-200.

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HOLLYWOOD BULLETIN BOARD

News briefs about the A.S.C., its members, and important industry personalities

ASC's OUTGOING President Lee Garmes (left) turns over gavel of office to President-elect William Daniels.

PRESIDENT DANIELS, in turn, presents traditional Past President's plaque to Germes in recognition of his Presidential achievements.

President-Elect William Daniels and other newly-elected officers were officially installed at the ASC's monthly dinner April 24 Daniel Fapp, sergeant-at-arms; Ray Rennahan, secretary; Charles Clarke, treasurer; Joseph Ruttenberg, 3rd VP; Milton Krasner, 2nd VP, Sol Halprin, 1st VP, and Daniels were innaugurated in that order by Martin Jurow, head of Famous Artists, who officiated as installer.

MARTIN JUROW

Outgoing President Lee Garmes turned the gavel of office over to Daniels, who in turn presented Garmes with the Society's traditional Past President's plaque commemorating his achievements during his term of office. Daniels' speech to acceptance was terse and to the point —that he would conduct his office strictly according to the Society's Constitution and By-Laws.

JIM BACKUS

Jim Backus, screen actor and well-known voice of "Mr. Magoo," regaled guests with a humorous monologue that matched anything the best of today's nightclub comics deliver.

Notable among the special guests attending were Jim Powers *(Hollywood Reporter* film reviewer), Paul DeVoe (Publisher of *Limelight)*, Charles Rosher, and Paul Klingenstein (head of Kling Photo Corp.).

Among the many congratulatory messages received by President Daniels was this telegram from Frank Sinatra, whose last four pictures Daniels has photographed: *"Dear Willie — Just heard the good word about your appointment. If you need a good cabinet member, I'm available. Can clean lenses, etc. Best.*

—Frank"

• • •

Death of two members of the American Society of Cinematographers last month has been reported.

Lewis L. Mellor, an Associate Member, died March 28th at the South Coast Community Hospital in Laguna Beach. At the time of his death, he was a physicist with the Missile and Rocket Division of the Ford Foundation at Newport Beach, Calif. He was widely known in the film industry for his development of lenses and while at Paramount Studios won an Oscar award for a pan-tilt tripod invention.

Stuart Thompson died April 25 following a brief illness. He had recently completed shooting the last of the season's schedule of "National Velvet" TV film series at MGM. Previously he had directed the photography of such TV film series as "Lassie," and "Have Gun, Will Travel." He also had been a director of photography at Paramount Studios, Hollywood, for a number of years. His wife Nell and a son and a daughter survive.

• • •

Irmin Roberts, ASC, last month completed the photography of 75 five-minute segments of "Lloyd Mangrum Talks Golf," a TV educational series produced by Alan Wise of Telemat. The golf action was shot at Apple Valley, the interiors at Teletex Studios, Hollywood.

• • •

Charles Rosher, one of the founding members of the American Society of Cinematographers, visited Hollywood last month following completion of his second 'round-the-world tour. In all, Rosher has covered more than 267,000 miles in his global treks. He has still to visit the Orient, a trip now in the planning stage. Rosher, now retired, makes his home in Jamaica.

CHAS. ROSHER, ASC

• • •

More ASC cameramen worked at Revue Studios last month than at any other—ten in all: Sam Leavitt, Ben Kline, John Russell, Jack MacKenzie, Mack Stengler, Ellis Thackery, John Warren, Russell Metty, Walter Strenge, and Ray Rennahan.

PAUL KLINGENSTEIN, head of Kling Photo Corp., New York, was a guest at ASC's April dinner. He is shown here demonstrating new Gossen Lunasix exposure meter to Arthur Miller, (center) and Ed Colman.

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1,000 ft. ARRI BLIMP for ARRIFLEX 35

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ARRIFLEX I, Mattebox 400' magazine viewfinder 3 Zeiss lenses case ... $695 00
ARRIFLEX I 3 Geerz Apogar lenses 200' mag motor ... $495 00
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WALL, 4 Bellar lenses, double claw movement pilot pins, 1000' mag 12V motor RCA Galve amplifier mike headphones cases ... $1995 00
DEVRY Magic Eyes 0-10° variable shutter 2" lens ... $149 50
MITCHELL STD, 5 Baltar lenses 2 1000' magazines 110V wild motors mattebox viewfinder cases ... $2995 00

★ CAMERAS, 16MM

AURICON, PRO 200 parallax finder sunshade NR amplifier, cases Excellent ... $595 00
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AURICON CINEVOICE I Amplifier case headphones mike, etc ... $595 00
AURICON SUPER 1200' parallax finder variable shutter 2 400' mags case Less galve $5300 list ... $2495 00
AURICON CONVERTED C170 VA galve synchmotor single lens mount, B&H turret finder 400' Mourer geared magazine Will make good double system recorder ... $895 00
CINEPHONIC, Magnetic recording 400' Mitchell mag 3 Elgeet lenses turret transistor amplifier power supply, mike Pre Ji triped and triangle $3000 originally, likeau ... $1995 00
BOLEX, Converted 400' mag; rackover telescopic finder 110V wild motor $900 original cost $449 50
AURICON CINE VOICE II 3 lens turret synchmotor Medalite S galve NR25 amplifier ... $995 00
CINE Special I 3 lenses, case ... $329 50
CINE SPECIAL II 1" fl 4 lens, 200' mag ... $695 00

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FAN CINOR 70 lens 4-in mount list $260 $149 50
KINEVOX MITCHELL BNC Automatic Slater cost $695 originally ... $249 50
MITCHELL 16 Freehead Tripod complete ... $344 50
CINE VOICE Portable Power Supply nickel cad battery, charger, $195 value ... $125 00
ARRIFLEX Variablac Powerpack used With built in charger $110 Less charger ... $99 50
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PHOTO RESEARCH Spectra Meters with filters sphere case 2 Color ... $129 50
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BABY heavy studio dolly ... $895 00
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CUSTOM BUILT 35mm Step Printer pilot pin registration ... $395 00
DOUBLE 8mm Hispeed Custom Built Printer 400' per minute from two negatives $3000 orig $495 00
DUPLEX REDUCTION PRINTER 35/16 picture with automatic light changers Good as is ... $1795 00
DEPUE REDUCTION Printer 35/16 picture with automatic light changers Good as is ... $2995 00
DEPUE PRINTER 35mm DUAL SOUND & PICTURE Prints from two negatives ... $1 295 00
TEL AMATIC 16mm SOUND & Picture Printer Semi automatic light change ... $995 00
DEPUE 16mm doublehead separate sound & picture 112 scene automatic liteboard, 3 ph drive $2250 00
B&H Printer, step contact pilot pin spreaders semi automatic light change $4000 orig cost ... $995 00
DUPLEX 35mm Step Printer pilot pin registration $795 00
CINECOLOR Double Head 35mm Step Printer with automatic lite change and timing device Originally $12,000 (Bank foreclosure) ... $2495 00

★ LIGHTING EQUIPMENT

10 000W Fresnel Spot heads cost over $500 $249 50
BARDWELL McALISTER 750W Baby Knglte heads $39 95
BARDWELL McALISTER 2000W Spots likeau $89 95
MOLE RICHARDSON 2000W Spots black #412 $79 95
MOLE RICHARDSON 5000W Spots black #415 $149 95
MOLARC 150 amp head, grid and pedestal List price $2410 when new ... $795 00
SILVER REFLECTORS 48", on rolling stands ... $49 50

★ RECORDING EQUIPMENT

KINEVOX SYNC RECORDER 17 5mm, 1000' capacity built in playback amplifier and speaker, 3 hours single case Cost $1595 ... $595 00
KINEVOX 4 position mixer AC operated, VU meter Cost $495 ... $225 00
STANCIL HOFFMAN Model S-6 Sync 17 5mm Mag Recorder & Reproducer P24C Power Supply play back amplifier cases Originally $2800 ... $895 00
AURICON RT80 16mm Optical Recorder VA Amplifier NR22 cases Originally $1100 ... $395 00
HALLEN 16mm Ironsafe recorder amplifier separate playback power amplifier and speaker New $1095 00
MAGNAGRAM (new Magnesync) 16mm center track recorder Counter 3 motors 1200' capacity Orig $2350 As is ... $525 00
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BACKGROUND Arc Projector 35mm movies or slides 120 amp arclamps; theatre lenses Cost $15 000 to build unassembled as is plus crating ... $395 00
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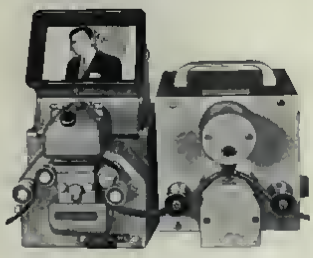

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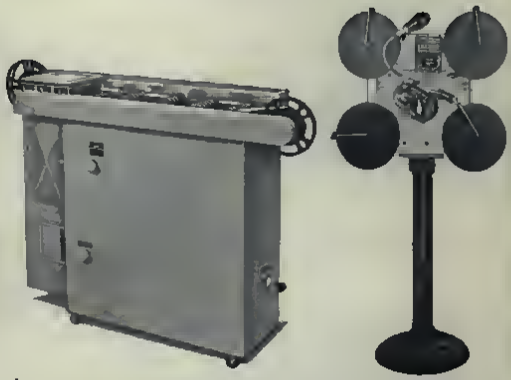

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WALTER STRENGE'S

QUESTIONS & ANSWERS

Need advice on a picture making problem? Your questions are invited and will be answered by mail. Questions and answers considered of general interest will appear in this column each month.

Q In a recent article about the photography of "Private Property," mention was made of neutral density material which was placed over windows to balance exterior light with the indoor illumination. Where can this material be purchased?—*R. C. J., Dallas.*

Answer: Camera Equipment Company, Inc., supplies this material. It is available for either black-and-white photography or for color. The material comes in rolls 40 feet in length and is 30 inches in width. We are advised that it is stocked in all CECO branches (Hollywood and Florida) as well as in New York. See the company's ads elsewhere in this issue for addresses.

Q I am planning a motion picture for which many scenes are to be shot on public streets. How can I insure getting action scenes in street locales without the intrusion of passersby gawking at the camera?—*P.L.B., Alviso, Calif.*

Answer: Your best bet is to shoot from a panel delivery car having one or more windows. Closed car will conceal your camera as well as crew. Be sure to remove glass from window through which you shoot to prevent reflections or distortion.

Q Where can I purchase sound effects records, also records of music in public domain?—*D. S. C., Manchester, Iowa.*

Answer: Thomas J. Valentino, Inc., 150 West 46th St., New York 36, N. Y.; also Boosey & Hawkes, Inc., 30 West 57th St., New York 19, N. Y.

Q I am building an animation stand which will accommodate a Cine Special 16mm camera and also an old 35mm DeVry. I wish to incorporate an an automatic follow-focus device so that as the camera moves toward or away from the animation table, the lens will be automatically kept in sharp focus on the art work. Have you ever published plans for such a device?—*S. V., New York, N. Y.*

Answer: We have never published anything on the subject mentioned. It will be difficult to build such a device for a home-made titling stand because it involves reduction gearing, leverage etc., in short, a great deal of special machine work and trial-and-error fitting. It can be worked out, however, but it is a real engineering job. Would suggest that you contact Animation Equipment Co., in your area, whose address is 38 Hudson St., New Rochelle, N. Y.

Q What incident light meter is most popular with Hollywood cameramen?—*H. J. B., Salt Lake City, Utah.*

Answer: Most generally used are the Norwood Director and the Spectra.

Q Can camera dollies be rented?—*P. J., Denver, Colo.*

Answer: Yes. Try Camera Equip. Co. or SOS Cinema Supply, in New York.

DEVELOPERS OF ADVANCED AERIAL IMAGE AND BEAM-SPLITTER PROJECTORS

Modern as tomorrow and streamlined for maximum efficiency, the **ALL NEW OXBERRY 1500-Series** Optical Step Printer is a truly remarkable machine. Designed to meet the growing demand for a high performance moderately priced unit, it embodies all the essentials necessary for fine optical printing and special effects work. It is built with the same high precision as the world-famous **OXBERRY 1000-Series**. This printer is substantially lower in price with greatly increased function and versatility.

The 1500 will do frame-to frame and continuous step projection printing, freze and skip frame work, in color and black and white. Zoom range from 5 diameter reduction to 4 diameter enlargement. Both camera and projector will

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receive 35mm and 16mm components, interchangeable without loss of optical centers or film alignment. Electro mechanical drive. Compound movement on projector head.

Price, complete——————————$15,900

The Standard model printer for 35mm includes the following: Camera with manual dissolve, 35mm shuttle and sprocket assemblies, automatic take up, 40 ft. magazine, counter, superimposure viewing device, precision compound lens mount, 103mm f/2.8 Ektor lens; electronic drive, stop motion and continuous, operates forward and reverse for camera and projector.

Full range of accessories available

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38 Hudson Street, New Rochelle, New York

OXBERRY

You'd know it blindfolded — that

CECO'S* NEW PRO JUNIOR FLUID HEAD

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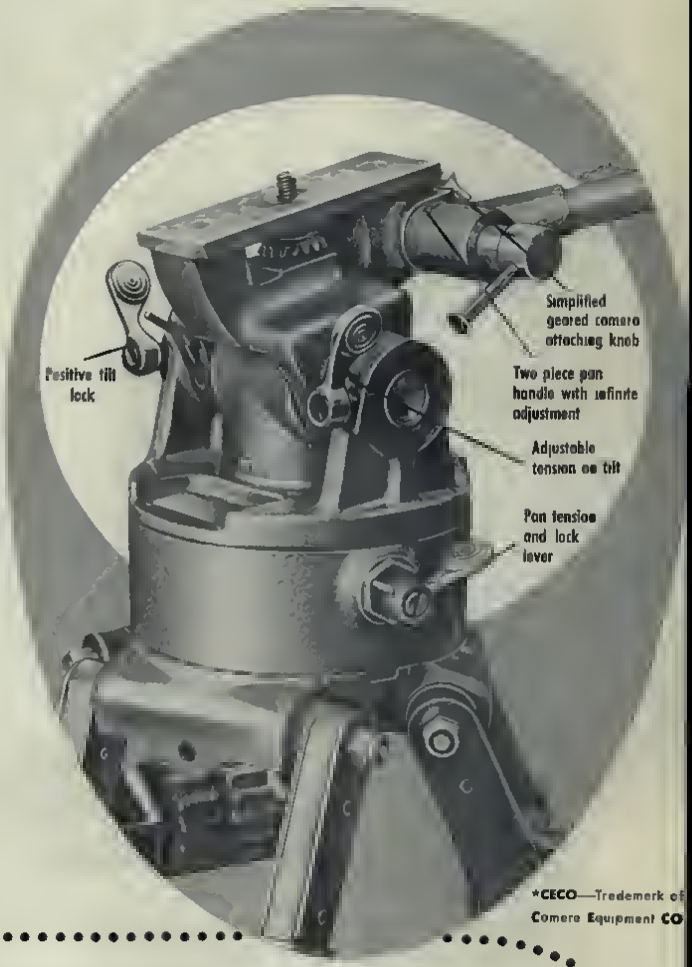
It's smoother, more rugged, better engineered, guaranteed leak-proof and locks without "diving"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Adjustable tension on tilt
Pan tension and lock lever

Our engineers were not concerned with building a "popular" model at a price. Their objective — to design a Fluid Head that cameramen dream about.

CECO's new Pro Junior Fluid Head is the acknowledged master. Its *worth* is being proved every day — in studios and on location, in tropical climates and in the frozen North.

You'll find yourself getting smoother pan and tilt shots, with smooth-as-silk maneuverability when you use the incomparable CECO FLUID HEAD. Works under any conditions with complete versatility.

If a Model T and a Caddy cost the same—is there any doubt which you'd buy—in this case, CECO'S PRO JUNIOR FLUID HEAD! Your professional status entitles you to the best. Come in. See it, try it and judge for yourself if we've overstated the facts. Can you make it today?

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ONLY CECO'S FLUID HEAD HAS THESE EXCLUSIVE FEATURES:

1. Silicone Molecular fluid is in one horizontal chamber. A rotating disc keeps the fluid equally distributed on the internal bearing surface during both panning and tilt operations.
2. Powerful, positive locking control keeps the camera in a fixed position indefinitely, eliminating the hazard of the camera "diving" when unattended.
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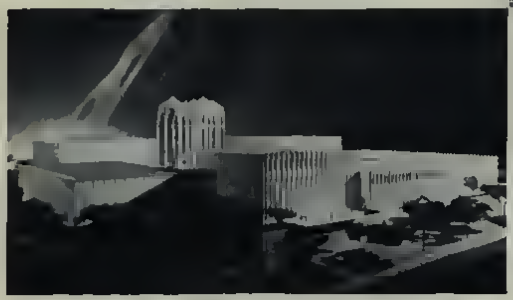
creates specialized motion picture systems to meet the most specialized needs!

From Seattle to Pakistan, on the ground or in the air, wherever the problem, whatever the need, Reevesound invariably comes up with the perfect answer. No job's too tough, no project inconceivable. And Reevesound does it all! Design, layout, manufacture, building, installation, operation—Reevesound specialists take every phase in tow to create a system tailored for your needs. Here are some Reevesound installations now making news throughout the world!

Motion Pictures while you fly!
Jet airliners will show full length features while in flight... thanks to Reevesound. This advanced system incorporates special screens and equipment with crucial safety devices that meet highest airline and Government standards. An aeronautic first... another Reevesound success, engineered for Inflight Motion Pictures, Inc.

Pakistan gets a studio!
A motion picture production center for the government of Pakistan! Reevesound planned and provided the complete design, equipment, technical facilities—and installed them. In addition, Reevesound supplied personnel and training to get the studio on its feet!



Breaking the presentation barrier!
The Federal Science Pavilion at the Century 21 Exposition in Seattle will feature a revolutionary multiple image projection system (seven projectors are employed). Designed especially by Reevesound for the U.S. Department of Commerce. The system will show a highly imaginative film presentation created by famed designers Charles and Ray Eames who worked closely with Reevesound engineers.

Other recent Reevesound systems included the U.S. Exposition, Moscow 1959; Latin American Atomic Energy Exhibition, 1960. If you need a special motion picture system, but think it can't be done—call Reevesound.

REEVESOUND Company, Inc. ■ 35-54 36th Street, Long Island City 6, N.Y. ● A subsidiary of Reeves Soundcraft Corp.

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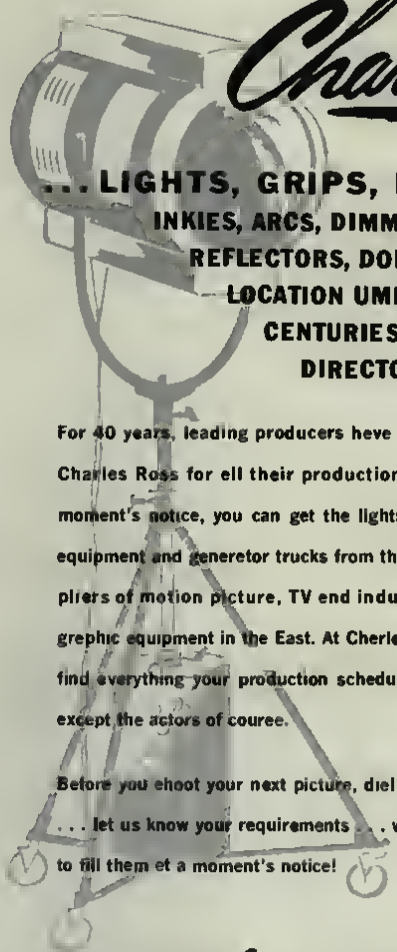

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For 40 years, leading producers heve depended on Charles Ross for ell their production needs. At e moment's notice, you can get the lights, props, grip equipment and generetor trucks from the lergest suppliers of motion picture, TV end industriel photographic equipment in the East. At Cherles Ross, you'll find everything your production schedule requires — except the actors of couree.

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Lighting the Motion Picture Industry Since 1921

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HARRY STRADLING, Sr., ASC, winner of five Academy nominations and one 'Oscar, directed the photography of "Parrish" for Warner Brothers Studio.

THE PHOTOGRAPHY OF "PARRISH"

This imaginatively photographed color picture contains some of the finest closeup photography seen in many years.

By HERB A. LIGHTMAN

"PARRISH," a craftsmanlike film in every element of production, is an outstanding example of color photography precisely keyed to complement uniformly excellent writing, direction and acting. The results achieved with Eastman Color film by Director of Photography Harry Stradling, Sr., A.S.C., is not only visually beautiful in itself—but, more importantly, the photography is all-of-a-piece with the demands of a film narrative involving a wide range of varying moods, locales and situations.

"Parrish" is primarily a story of the land—the verdant Tobacco Valley of Connecticut—and the people who work it. The average viewer may be as surprised at this as one of the characters in the film who exclaims: "I didn't know they grew tobacco as far north as Connecticut!" But grow it they do, in vast fields under gossamer canopies of gauze that prevent the sun's rays from falling directly upon the tender "shade" tobacco.

Because the story action had to be synchronized to various stages in the growth and development of tobacco plants, it was necessary to make four separate location trips to Connecticut to film the exterior scenes during different seasons. Writer-director Delmer Daves and a second-unit camera crew made the first trip during the winter months in order to shoot background snow scenes. The other three trips (during the spring, summer and fall seasons) involved the entire cast and crew working in a number of different locales. In between location trips the company shot interior sequences on the sound stages at Warner Bros. Studios in Hollywood.

Extremely interesting scenes of tobacco cultivation were filmed on vast farms in the vicinity of Windsor, Conn. Since work on the farms could not be halted merely

NEWCOMER Troy Donahue (3rd from left) helps workers prepare cheesecloth covering to spread over the tobacco field in 'Parrish."

CONNIE STEVENS brings Donahue home to meet her family and finds them intrigued by a new television set.

because a film was being made, the regular field hands often went about their work just out of camera range, while the actors were going through virtually the same motions for their roles.

The luxury waterfront resort, scene of important action in the picture, is the Terra Mar Boatel at Old Saybrook where the company lived for a week while filming sequences around the swimming pool, recreation area and marina, as well as inside the buildings. Shooting location interiors here posed a "mixed-light" problem, which was further complicated by the fact that the glass walls were too large to permit the use of neutral density gelatins to cut down the outside light. Partial screening with translucent drapes helped somewhat. But, even so, it was necessary to use strong arc lights to build the interior illumination up to balance with the brilliantly sunlit exteriors seen through the windows. Reflections striking the glass also created an obstacle until Stradling ordered the building of a shed-like structure outside around the windows to prevent the sun striking the glass.

The opening sequence of the picture, in which two of the main characters are seen crossing the Farmington River on a ferry boat, was filmed during a rainstorm. It wasn't planned that way, but the determination to shoot despite the inclement weather was in line with the current economic necessity to keep on shooting no matter what the conditions—a policy which frequently challenges the ingenuity of the cinematographer. Stradling, with forty-plus years of experience in the industry, refuses to regard this as any great problem. He does, however, admit that without the new high-speed Eastman Color negative it would have

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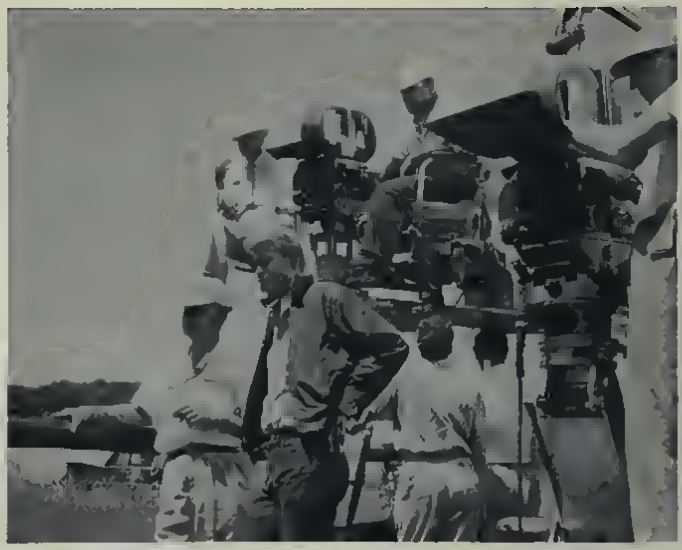


HARRY STRADLING, Jr., who photographed "Parrish," and Troy Donahue who starred, watch director Delmer Daves (top, left) prepare next scene for the camera. Location scenes were shot in and around Windsor, Connecticut, important tobacco growing center which produces a special quality of tobacco used in fine cigars.

DONAHUE AND Miss Stevens quarrel at their rendezvous in the tobacco drying shed. This was one of the most difficult sets to light.

DONAHUE'S employer (Karl Malden) explains some of the facts about tobacco growing, and of his plans to squeeze out neighbor-farmer

STL'S CINEMATOGRAPHERS AT WORK—R. Niles and W. Gruenberg line up camera on a moon model constructed by the company's in-plant motion picture unit. In addition to informational and promotional films for the company, the film unit aids substantially with technical cinematography of tests and experiments for study by company engineers.

This well-equipped and expertly-staffed in-plant motion picture unit plays vital role in the engineering and development of missiles and space satellites at

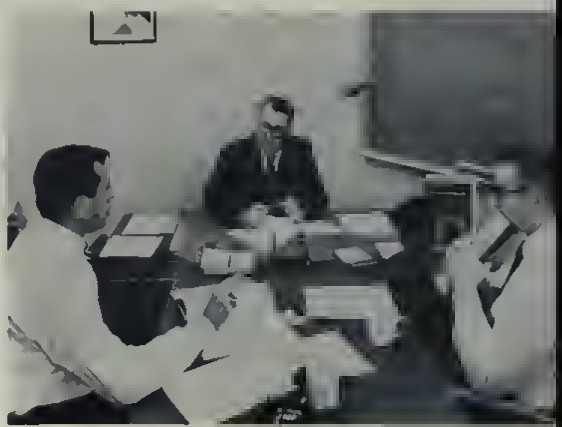
SPACE TECHNOLOGY LABORATORIES, INC.

By CHARLES LORING

SPACE TECHNOLOGY LABORATORIES' in-plant motion picture production unit is sparked by an energetic, highly enthusiastic group of experienced technicians. It is precisely geared to the demands of space technology and is increasing in capability and physical growth to match the rapid expansion of the exciting new industry which it serves.

Like the company itself, STL's motion picture unit was created to meet the specific requirements of space research. But, unlike similar units func-

SCRIPT CONFERENCE precedes every important film production undertaking by STL's motion picture unit. Seen here kicking around a continuity idea are (from left), B. Ederer, writer; H. Peppe, supervisor; and E. Schrier, film editor.



tioning with companies which were originally airframe manufacturers, it has from its inception concentrated exclusively on what its technicians refer to (with a Buck Rogers gleam in their eyes) as "adventuring in space with missiles and satellites."

The growth of STL's motion picture unit parallels that of the company itself. Only a few years ago neither existed as such—but, as the guided Missile Research division of the Ramo-Woolridge Corp. was stepped up to meet the demands of the Space Age, a subsidiary was created and split off as a separate company called Space Technology Laboratories, Inc. Today, STL is a subsidiary of Thompson-Ramo-Woolridge, Inc. The motion picture unit was formed as a result of the company's contractual requirements with the U.S. Air Force, which requires carefully detailed motion picture progress reports to be supplied on each new project. Functioning to fulfill this requirement and also that of the company's own engineers, the film unit has existed from its inception in an exclusively "space" environment.

STL'S MOTION PICTURE UNIT cameramen W. Gruenberg and R. Niles get set to photograph a company technician working on model of Pioneer V space satellite. Note the professional lighting equipment used to illuminate the scene, which was photographed with 16mm cameras

Film Subjects "Top Secret"

STL's film unit is currently engaged in making films for a wide variety of projects, the most dramatic of which are so top secret they cannot be described for publication. However, it can be revealed that the unit regularly films phases of systems engineering and technical direction for Air Force missiles, including the Atlas, Titan and Minuteman. Its most interesting assignments have arisen out of the fact that STL has designed, constructed, tested, directed the launch of, and tracked the Pioneer I satellite (America's successful deep-space probe), the Explorer VI (first of the famous "paddle-wheel" satellites), and the Pioneer V (the solar satellite with which communications have been maintained while 22½ million miles into space).

In addition, the motion picture unit functioned significantly as part of a successful team that helped win for STL the contract to produce the new Orbiting Geophysical Observatory — sometimes called the "street car" satellite because flights will be made on a relatively frequent basis with each flight carrying up to fifty separate experiments. When bids for this contract were announced, the motion picture unit produced a film showing details of the model of STL's proposed vehicle. This film was presented to the Jet Propulsion Laboratories and to the National Aeronautics and Space Administration together with the company's written proposal, and it is generally conceded to have carried great weight in the awarding of the contract.

A typical project is the film which was originally made as a progress report for the Air Force on the Transit-Courier communications satellite, an Earth-orbiting space laboratory with instruments designed to pick-up weather information in space and transmit it back to Earth. This film was later re-edited for public presentation and was shown on Dr. Martin Kline's "Adventure Tomorrow" television program with an STL scientist giving a live commentary. It featured exterior shots of the satellite, explained what it was intended to do, its instrumentation, the components which gather and send back information, the location of tracking stations around the world, and the Data Reduction Center in the STL complex. The unit sent its own crew to film the tracking station in Hawaii. Shots of the Singapore station were made by a free-lance cameraman in that locale. Footage of the Cape Canaveral station was provided by RCA, which holds the exclusive contract for filming at the Cape. A similar film on the Moonshoot project was made by the unit for showing on another presentation of "Adventure Tomorrow."

Available To All Departments

The directors of STL are highly motion picture-minded. They regard the film medium as a strong public relations ambassador to the world at large, an effective selling aid, an important educational instrument, and a valuable tool of scientific engineering. As such, the services of the motion picture unit are available to every department of the company as needed.

When, for example, the engineers of an STL laboratory wish a particular experiment filmed for

Continued on Page 306

Everywhere in the world... because it's on film!

Today—people everywhere "go to the movies"—to laugh and cry together... to "get out of the house," away from it all, into a world of illusion and make-believe, a world in which they're loved and beloved—conquerors, swashbucklers—anything, everything their hearts desire.

No wonder so much time, money, and materials is spent in making motion pictures more effective. Nor is it any wonder that this investment is so rewarding, or that the Eastman Technical Service is constantly engaged in helping the industry solve its questions of production, processing and projection.

Branches at strategic centers. Inquiries invited.

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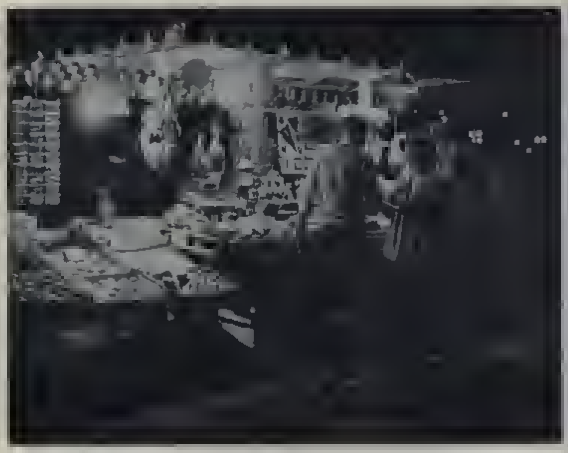


f/0.9—Typical available-light scene possible with the new, faster Kodachrome Type II color film, using extremely fast lens

f/1.5—Outdoor night scenes such as this filmed with Kodachrome II and a fast lens have remarkable detail

The New Kodachrome Type 2 Film

Impraved colar reversal film is foster, sharper, less cantrasty, and has softer gradotian than regular Kodachrome. It affers new color film possibilities for prafessianal and amateur alike.

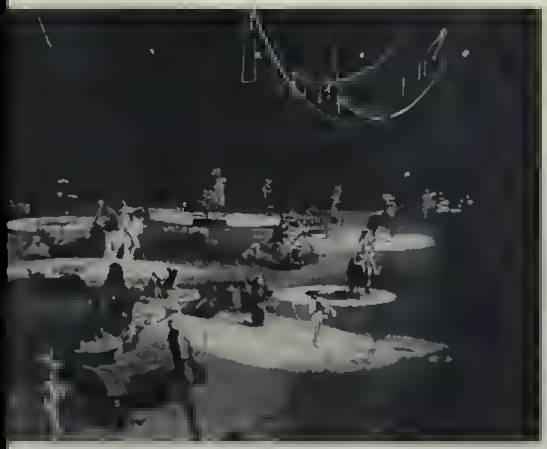
By ERNEST WILDI

WHILE THE NEW Kodacbrome Type II film cannot be considered a truly bigh-speed color film, its extra sensitivity compared to standard Kodachrome offers film makers an important new medium for low-level-light photography. The new color reversal film, available in both 8mm and 16mm, is rated ASA 25 for daylight and ASA 40 for use with photoflood illumination. Being two and one-half times as fast as regular Kodachrome, it offers the film maker many advantages. Industrial and in-plant cinematographers especially will find it useful for some color film assignments.

The film's increased speed makes it possible to reduce lens apertures by 1½ stops, thereby increasing depth of field. On interiors, photofloods or other studio lamps can be placed farther back from subject and camera where light glare is a problem for subjects—especially small children.

For 8mm and 16mm amateur film makers, Type II Kodachrome now makes possible shooting under conditions which formerly were out of the question. Now these same camera owners can film stage and ice shows, circuses, indoor sports events, night street scenes, fireworks displays, etc. Heretofore, many amateurs and not a few 16mm professionals were unable to shoot such subject matter because of the limitations imposed hy the speed of their lenses. Few 8mm cameras, for example, are equipped with lenses faster than f/2 or f/1.8. The sensitivity of the new Kodachrome Type II film is increased sufficiently to now permit shooting most all of the low-level-light subjects mentioned above.

Although a film rated ASA 40 (tungsten) generally is not considered "available light" emulsion, the new Kodachrome II is sensitive enough to permit shooting indoors with illumination provided by a table lamp or an overhead lighting fixture—and without augmenting this illumination with photo lamps of any kind. Of course, this is not possible with every camera. To make acceptable exposures



f/1.9—With your lens set at this aperture and with the new Kodachrome II film in your camera, you can make excellent circus shots

in the illumination described above, a lens with a maximum aperture of f/0.9 would be required. Such lenses are available today for both 8mm and 16mm cameras. Two lenses that have found wide acceptance are the Switar 13mm f/0.9 for 8mm cameras and the Cinor 25mm f/0.95 for 16mm cameras. The mounts of both lenses are standard and therefore are adaptable to many 8mm and 16mm cameras.

It is difficult to design a lens which will produce sharp, contrasty pictures at these extreme apertures; thus, such lenses are not inexpensive. The advantages and wonderful pictorial possibilities they offer are, however, so exciting that they are a worthwhile investment. When used with the faster Kodachrome II film, they make unnecessary the use of indoor lighting equipment except when shooting in extreme low light levels. The cost saved in not having to purchase such equipment helps to balance the cost of high speed (maximum aperture) lenses.

This fast-lens, fast-color-film combination offers other advantages, too. No longer is it necessary to string extension cords and set up light stands in a living room or hall to film, say, a wedding reception. Subjects are more at ease before your camera when glaring lights are not beating down upon them. And finally, shooting indoor scenes in *available light*, which the new Kodachrome II now makes so very easy, insures films with more professional polish.

The three photos reproduced here show typical scenes now possible with this new, faster color film and a fast f/0.9 lens. The range is almost limitless: night scenes of people in an amusement park; at a county fair; groups under a lighted theatre marquee, in a used car lot, or anywhere that there is substantial illumination for available light photography.

For the professional 16mm cameraman, the use of an ultra-fast f/0.9 lens with Kodachrome II film can produce pictures having better definition than is usually obtained with color films having a higher ASA rating and used with slower lenses.

Eastman Kodak Company, in its initial public announcement on the new Kodachrome film in its *Handbook News*, stated: "Kodachrome II is sharper than regular Kodachrome. The emulsion is thinner and scatters the light less. It lets you project big, sharp images of excellent quality, even when viewed close to the screen. The improvement in sharpness is most evident in 8mm movies because of the tremendous magnification required for screen-size images. The sharpness of 16mm Kodachrome II is similarly improved, but this may not be as noticeable because the images are magnified less during projection. Obviously, the comparative sharpness will depend on the optics involved—the higher the resolution of both the camera lens and the projector lens, the more pronounced the

Continued on Page 312

KODACHROME II

Exposure Index and Correction Filters Data

Film	LIGHT SOURCE		
	Daylight	3400°K	3200°K
Daylight Type	ASA 25	ASA 40	ASA 32 with 82A filter
Type A	ASA 25 with 85 filter		

EXPOSURE DATA FOR KODACHROME II (at 16fps)

Typical Subjects or Scenes	Recommended f/ Settings
Well-lighted stage and ice shows	f/1.9
Individual performers in bright spotlights	f/2.8
Indoor sports in well-lighted areas	f/1.9
Streets with neon signs at night	f/1.9
Closeups of individual neon signs of average brightness	f/1.9 to f/2.8
Closeups of very bright neon signs	f/4
People under bright movie marquee	f/1.9
People under average movie marquee	f/1.5
Fireworks	f/1.5 or f/1.9
Regular room lights (overhead or table-lamps)	f/0.9
Child with birthday cake—light from candles plus room lights	f/1.5
Subject close to a single candle	f/0.9
People illuminated by lights in a used car lot or from a stand in an amusement park	f/0.9

RUSSELL METTY, ASC, makes brief "thank you" speech following presentation of Oscar by actress Cyd Charisse and husband Tony Martin for his photography of "Spartacus."

1960 OSCAR WINNERS

Russell Metty and Freddie Francis Win Awards For Best Cinematography of 1960.

THE PHOTOGRAPHY of "Spartacus" and "Sons and Lovers" was voted best of 1960 by members of the Hollywood Academy of Motion Picture Arts and Sciences, and a golden Oscar was awarded the director of photography of each production at the Academy's 33rd annual presentation ceremonies April 17th.

The awards added two new names to the roster of Oscar winners for cinematography. For Russell Metty, ASC, who photographed "Spartacus," the award is his first from the Academy. It is a first Oscar award also for Freddie Francis, member of the British Society of Cinematographers, who photographed "Sons and Lovers."

Of the two winners, only Metty was present to accept his award. Freddie Francis, who was in England, had his Oscar accepted for him by a business representative of the film's producer. Neither Francis nor Metty have ever before been contenders in the annual Oscar derby.

In addition to the award for cinematography, "Spartacus" was also voted awards for Best Supporting Actor (Peter Ustinov), Best Costume Design (color production); Best Art Direction in Color; and Best Set Direction in Color. The cinematography award was the only Oscar earned by "Sons and Lovers."

For Russell Metty, the Oscar awarded him for best achievement in color photography is well deserved. "Spartacus," a wide-screen color spectacle which has been highly successful at the box-office, was photographed in Super-Technirama. With the big, bulky cameras of this process mounted on cranes and dollies, Metty kept them moving so skillfully throughout most of the picture that the audience unconsciously is drawn into the midst of what is happening on the screen without realizing that the camera is on wheels much of the time. Thus it is that Metty's fluid mobile camera contributed as much as the excellent performances to the excitement and realism of "Spartacus."

Metty's lighting in scenes for "Spartacus" subtley adapts to the shifting moods of the story. On Kirk Douglas and his fellow gladiators he employed strong cross-lighting to emphasize their virility. His artful lighting techniques also lent special character to the sets. Those of the Roman Senate, for example, are limned in clear, sharply-defined planes of light suggesting the aura of efficiency pervading that legislative body. The dungeon-like cells of the gladiators, by contrast, are suf-

Continued on Page 318

Note: Print quality begins in the Camera. (If there's Anscochrome Type 242 inside, that is)...

When accurate, unbiased color is needed in the final print, the best start is with 16mm Professional Anscochrome® Type 242. This low-contrast camera film is designed specifically for that purpose. Just test it once. Note the clean highlight detail and excellent D-max in release prints from Type 242 originals. Check the richness of the critical reds, greens and blues. And note the way Type 242 produces consistent characteristics reel after reel. Color *uniformity*, color *accuracy* and total *dependability* . . . three reasons to choose 16mm Anscochrome Professional Type 242 film. Ansco, Binghamton, N. Y., A Division of General Aniline & Film Corp.

Ansco

Type 242

UNIQUE THREE CAMERA set up for making moving-camera shots at three different angles or levels. The special camera mount described by auther is shown on automobile hood, at left. All three cameras are motor-driven. One mounted on bumper has a motor driven zoom lens which, like the cameras, is remote controlled

BASE OF CAMERA mount is secured to car by anchoring it to radio antenna (1) and to car frame by means of long, slender bolt (2) which extends down between hood and fender opening. Sponge rubber pods (4) plus steel spring (3) provide shock absorption for camera when car is in motion

CONTROL PANEL which enables driver to switch any one or all cameras on or off when making moving-camera shots

CAR MOUNT FOR CAMERAS

Shooting from a moving automobile simplified with this rugged, jiggle-free camera mount.

By ROY ZEPER

WHEN THE SCRIPT CALLS for moving-camera shots, the in-plant cinematographer invariably uses a company car or his own automobile to make them, and this often poses the problem of how to mount the camera (or cameras) so that the resulting shots will be jiggle-free, and access to the camera be simple.

There is nothing professional about shots made from a moving vehicle with the camera hand-held, where the motion of the vehicle plus the jolts and vibrations induced by uneven road surfaces makes jiggle-free shots impossible.

If all the different gadgets and devices conceived to date for mounting 16mm cameras in an automobile were laid end to end, they'd stretch pretty far. But this wouldn't solve the problem of the in-plant cinematographer faced with making such shots with no gadget of this sort at hand.

Faced with an assignment of this kind some time ago, I designed and built a simple mount I consider more versatile than many others because it can be used in a number of locations in or on an automobile or other moving vehicle. Pictured in the photos at left, it consists of a spring-and-sponge-rubber-mounted base to which is attached a conventional tripod tilt-and-pan head for the camera. The base proper is a piece of $\frac{3}{4}$" plywood 6-inches wide and 4 feet in length. When it is to be mounted on the hood of an automobile as pictured at left, the rear section is slipped over the radio antenna (1). A slender bolt (2), extends down to the car frame between the hood and fender opening and insures lateral rigidity.

Extensive tests revealed that a spring-tensioned mount was essential—one that would absorb minor tremors yet maintain the camera semi-rigid in respect to the vehicle on which it was mounted. The motion and vibration absorption therefore was provided by a combination of spring metal and sponge rubber. The curved spring is shown at (3), and

the sponge rubber pads may be seen mounted at either end of this member. Two bolts with double wing nuts extending through an adjustable arm above the spring permit adjusting the camera mount to conform with the contour of the automobile hood and fender on which it is mounted, so that the mount and therefore the camera will be exactly upright.

The weight of the camera plus the fastening of the mount to the car places a tension on the curved spring-metal strip and creates a cushion—with the additional aid of the sponge rubber pads (4)—that effectively damps nominal car vibration and lateral motion. The weight of the car also determines the amount of spring tension—achieved by adjusting the wing nuts. In addition to providing vibration absorption, the sponge rubber pads also serve to protect the car finish—or the car interior when the mount is used inside.

The versatility of this camera mount is such that it may be used successfully within the automobile, on the hood, roof, or on the lowered tailgate of a station wagon.

The top photo on opposite page shows three different 16mm cameras mounted on a Chevrolet sedan for making a sequence of traveling shots at three different camera levels. One of the cameras—a Cine

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AUTHOR filming from rear of station wagon, using shock-absorbing camera mount described in accompanying article. As with the hood-mounted setup pictured on opposite page, the camera may also be operated by remote control in this position

STEADY PROGRESS IN FILM IMPROVEMENT

E-K Executive reveals that while B&W film quality has steadily improved, basic cost remains relatively unchanged.

By DON HYNDMAN

Director, Motion Picture Film Dept., Eastman Kodak Company

IN 1887, AN EMPLOYEE at Thomas Edison's research laboratory in New Jersey, conducted an experiment with an instrument that would reproduce motion just as the famous inventor's phonograph reproduced sound. Small images were photographed on a continuous spiral of film which was then wound on a cylinder. This was the first motion picture.

Two years later, the employee, W. K. L. Dickson, reached the point where it became necessary for him to obtain improved film in order to continue his experiments. He wrote to George Eastman, then a pioneer in the film industry, and ordered a continuous strip of 35mm film.

Eastman filled the order and charged Dickson $2.50. The result was a strip of continuous film, standardized at 1 3/8 inches in width, with four perforations at each edge of every frame, basically the same configuration that is used today.

With the introduction of black-and-white motion picture film and enduring physical dimensions that set a standard that prevails today, Eastman's business took a turn of its own around the turn of the century. A new industry was born and the indications were that it would have an illustrious future.

Old Films Improved

The first motion picture used the same type film for making both negatives and prints. Later, Eastman Kodak Company produced separate films specially designed for camera use and for making prints. These new films provided better overall tone reproduction, and greater facility in the processing and printing operations.

In the meantime, scientists and technicians went to work on improving the old films while searching for leads on ways to develop new and better ones, as motion picture film became the basis of a new and burgeoning industry. In essence, black-and-white motion picture film has been the heart of the entertainment business. As its technology improved, so did the end product of the entire motion picture industry.

By 1916, the pioneer motion picture studios had settled in Hollywood in order to take advantage of the abundant sunlight. At that time, there was only one negative film and one positive film. The former was sensitive to blue, violet and ultraviolet light and had to be exposed either outdoors by daylight or under heavy arc lights in the studios.

Improved Films Aid The Industry

Changes were made in the composition of both negative and positive films so often in that period of time that the Eastman Kodak Company adopted the practice of giving a film a new name and (or) identification number only when a major breakthrough occurred. A constant string of minor improvements was accepted as a matter of course.

As motion picture films improved in sensitivity, producers were able to include new and more dramatic scenes in their productions. Figuratively, as the film manufacturing industry developed, so did the motion picture entertainment industry. The one-man camera "crew," who prayed for sunshine so he could get adequate exposure of his film during the early 1920's has grown up. In his place is a versatile team that can produce motion pictures any place, anytime.

Certain major trends in black-and-white film improvement have led to resultant trends in the motion picture film industry. Less than 40 years after flickering one-reelers like the "Headless Horseman" dominated the screen, Hollywood now produces such technical and dramatic triumphs as "Anatomy of a Murder," where stark realism is a trademark. Light and speed problems are no longer a serious detriment

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AN INTERVIEW . . .

with Arthur Miller, A.S.C.

MOTION PICTURE SET LIGHTING

IN CONCLUDING this interview with Arthur Miller on the subject of set lighting, we are aware of course that we have but scratched the surface of this comprehensive subject. It is hoped that the series of questions and answers below and those in last month's issue will provide readers with helpful information about professional set-lighting principles, techniques and equipment. Interviews with other Hollywood directors of photography are scheduled for future issues of American Cinematographer.—Editor

TYPICAL LAMPS USED for lighting sets in motion picture studios are these Fresnel lens-equipped Mole Richardson Solarspots, which provide for focusing and flooding the lamp beam and take barn doors that permit additional control of the light

Q—You explained earlier (In the first part of this interview, published last month.—Ed.) the first thing that the director of photography does in preparing to light sets for a new production. Now just what is the procedure followed in actually lighting a set that is to be photographed in black-and-white?

A—One of the major objectives in lighting a set is to achieve modeling and separation in the players and the set itself. This cannot be accomplished by simple, flat lighting. In contrast with the general flood-lighting techniques of an earlier day, the actors and the set today are lit with controlled illumination from individual spotlights, each adjusted to an intensity determined by the director of photography. The key set lamps are so placed that the actors on the set will be uniformly lighted at all times, unless the story action dictates otherwise.

Arthur Miller A.S.C.

Therefore, the first thing the director of photography must determine is the positions the various players will take on the set, and if one or more is to move about during progress of the scene, he must know where and how far the player will move. To obtain this information the scene is first rehearsed.

Usually the director will walk all the actors involved through the entire action to give the director of photography a chance to study it and plan the placement of the lights. If it is an action scene in which one or more players will move about the set, the assistant cameraman will make chalk marks on the floor at every spot where an actor stops and talks or plays a part of the scene. This is usually a quick run through and then the regular actors are released. The stand-ins then come on the set and they are used in place of the actors to aid the director of photography place the lights. The key light or lights are set first.

Q—What is meant by "key light" and "key-lighting"?

A—The key light is the main source of light. "Key-lighting" means lighting a set directionally, or keying the lighting to the natural source of illumination established by the set or the story—a large window admitting strong sunshine, a large chandelier overhead, etc. This does not mean that all the light should come from the same direction, but that the dominant highlight should appear to come from the source visually established within the scene.

The normal concept of light is that it comes from above. Outdoors, even on a cloudy day, the light comes from the sky. Indoors, most illumination normally comes from overhead. For this reason, most key lights illuminating a set are placed high—usually on rails above the set, suspended from catwalks, or mounted high on parallels.

For shooting closeups, however, the key light is on the floor—mounted on a stand close to the player, with the lamp positioned just above the level of the player's head.

Q—What set lamp is generally used for the key light?

A—It depends upon the distance from lamp to actor. Usually a Junior suffices for a distance of 20 to 30 feet for black-and-white photography. The Junior's intensity

can be varied—it can be "pulled down" and concentrated or set at full flood

***Q*—Is there often more than one key light placed on a set?**

A—Yes. Take a scene in which two players walk and are facing parallel with the back wall of the set. One key light would be placed high at the side and played on one actor, and a similar light would be placed high on the opposite side and played on the second actor, with another light, if possible, just leading across and onto the sides of the faces toward the camera.

If one of the player's is a girl—and particularly if she is blonde or is wearing a light veil over her hair—backlights are often placed to produce a highlight on her. As much of the lighting is done from overhead as possible. This procedure is generally followed in lighting every player involved in the scene.

After this basic lighting is completed, you back off and study the results of the entire set lighting up to this point. The next step is to add the fill lights—usually broads.

***Q*—Are these placed on the floor?**

A—Yes. The number of broads used will depend on the intensity of the fill light desired.

***Q*—Getting back to the key lights again, how do you determine how strong these lights should be, and how is the intensity adjusted?**

A—When these lights are set for the long and medium shots, the electricians on the catwalks overhead place and adjust the lamps. You ask for a lamp on a player at one spot. It's turned on, adjusted; you read the intensity with your meter and order it dimmed or brightened until you get the intensity you want. Now, after this lamp is set, you see that some of the light is spilling over on another player or a part of the set where it is not wanted; you have the grip mount a cutter before the lamp to narrow down the beam or otherwise cut off the beam so it won't spill over into the unwanted area.

***Q*—You have referred to adjusting or dimming the key lights. How is this done?**

A—For incandescent lamps, by use of a dimmer board or panel. Sound stage dimmers are something like giant-size rheostats which raise or lower the voltage feeding the set lamps, and simplify the matter of balancing and re-balancing the various light units.

A dimmer "board" is usually a mobile affair having a number of individual dimmer plates mounted side by side, with the control handles extending upward and through a panel where cue marks may be placed to guide the dimmer board operator.

The intensity of a lamp can also be altered by putting on diffusers or, where the incandescent lamp is adjustable, by concentrating or flooding the light beam. The usual practice is to flood it, while holding a meter on it, until it reaches the desired level. If the beam spreads out too much, the beam is controlled by barn doors, cutters or gobos—depending on the situation at hand.

***Q*—Setting the key lights, then, is the initial step in lighting a set?**

A—That's right. Now sometimes you will have a set with a large window with sunlight pouring through. This becomes not only the source light but when players come within range of the window, the light coming through from the outside also becomes the key light. If the players walk away from the window light then other key lights must be established to light them and maintain the key. In a situation such as this the fill lights play an important role; they maintain a balance of illumination on the player as he moves from one key-light area to another—unless, of course, the scene is such that he is to walk from light to darkness and into light again. In short, the fill lights fuse together and smooth out the whole set lighting pattern.

***Q*—Earlier you stated that the fill lights were on the floor. Just where are they placed in relation to the camera?**

A—Roughly—although one cannot be entirely specific, because every set is different—fill lights are placed at the front of the set, facing the players. They are always out of camera range, of course—usually set up on either side of the camera, depending on the effect desired.

***Q*—How do you determine the fill light placement—by the positions of the stand-ins?**

Continued on Page 319

SOME OF THE LIGHTING equipment and accessories described above are shown in use in photo at right, with the various units numbered for reference. Position of the camera is shown at 1. "Gobos" are shown at 2 and 3. These are 2-in. batten frames, about 2-ft. by 6-ft. in size, covered with black muslin, and are extremely light in weight. Suspended from the catwalks overhead, they serve to cut off some of the overhead light so it will not fall on certain players or areas of the set. The "cutters," 4 and 5, are another form of gobo—much smaller, and consist of a wire frame with black muslin stretched over it. They are usually mounted on Century-stands, as shown here. Three 'Juniors' (1000-watt lighting units) are shown at 6, 7, and 8. Each is fitted with barn doors to control the light beam size or its direction. Lamp 6 provides front cross light; 7, key light; and 8—high up on the tree trunk—back cross light for the three players immediately below it. Lamp 9 is a "5-K" and is used as one of the key lights. Lamp 10 is a "Double-Broad," a typical fill light unit. The lighting of this scene, incidentally, would look entirely different when viewed from position of the camera, 1.

The purpose of the film score is not only to supplement the action on the screen, but to tell the same story in its own language.

THE SIGNIFICANCE OF FILM MUSIC

By JEFFREY M. DANE

EVER SINCE ORIGINAL music scores were first used in motion pictures, the art of composing for the screen has broadened in scope almost as much as the movies themselves. Motion pictures are in every way continually changing; accordingly, so must all things connected with them.

Composition is in itself a highly specialized field of music, and composing for films falls into a different branch of that field. The composers who write for the screen are confronted by several ideals, each of which they try to fulfill in their music. One of their main objectives is to compose a music score that will reinforce the action in the film, while at the same time retain its musical continuity.

Music By Miklos Rozsa

Miklos Rozsa is one of the few composers who keep their movie scores confined to a set pattern; his are invariably symphonic in style and consequently always retain their musical continuity.

In his music for *Ben Hur*, Dr. Rozsa, created a classic in movie scores. Rarely has so much musically descriptive material been poured into a mere introduction to a movie. The opening motiff actually creates the mood for the entire feature, and it makes the theatre audience aware that something of great importance is about to occur on the screen.

As a shepherd's horn is heard, a sudden, gradual, but strong buildup is sounded by the brass section and then sustained on a chord as the title "A Metro-Goldwyn-Mayer Production" appears on the screen in gold Roman lettering. As the crescendo continues its way up the scale, a cymbal crash and final chord of the opening motif is heard, and the main title "Ben Hur" appears on the screen against a magnificent backdrop of the painting, "The Creation of Man," by Michelangelo. It is extremely difficult to stimulate so many emotions in such a relatively short passage, but Rozsa achieves this in *Ben Hur* and the results earned him his third Academy Award.

One of the factors that contributed to his being assigned to execute the score for *Ben Hur* was his thorough knowledge of ancient Roman music, of which almost nothing has survived. Rozsa acquired this knowledge while doing intensive research on the subject for his second Academy Award-winning movie, *Quo Vadis*.

Because the motion picture is the biggest entertainment medium today, Miklos Rozsa is more widely known for his movie scores than for his neo-classical works This is looked upon as unfortunate by those who are aware that his eminence as a serious composer is undisputed, especially in Europe, where he is perhaps even more revered than in the United States. He writes his music in bold, powerful strokes, which reflects his Budapest origin. The unique style he has created for himself is invariably prevalent in his music, and can, in many cases, be detected in his film scores.

Late in 1940 Rozsa was assigned to compose the score for *The Thief Of Bagdad*. Since the movie itself had an oriental setting, the score that was produced naturally had a characteristically oriental sound; but the music's verve was definitely rooted in the Hungarian idiom, but without the traditional folk melodies. The reason for this is simple: *The Thief of Bagdad* was Rozsa's first movie score assignment, after having come to America for the first time directly from Europe.

Methods of Composition

Music cannot be used in a motion picture without becoming an integral part of it; it becomes the predominant factor in the theater that sets the mood for the ensuing feature.

Continued on Page 304

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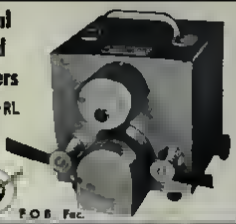

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FILM MUSIC

Continued from Page 302

Different composers are known to employ or favor different methods of composing for the screen, even though the producer may at times decide as to the method the composer will use to execute his score. Looking at the situation from the standpoint of a great number of screen composers, being on location with the company during the production of a movie is the best way to get maximum inspiration. When the composer is afforded such an opportunity, it is there that he gets his first-hand impressions of what type of score he will compose, and then makes notes of his ideas in music as they occur to him. Composers naturally wish to express a great deal of feeling in their music, and the results of having been on location have helped earn many a composer nation-wide praise.

The music score is usually the last item that is applied to the completion of a movie, and this is why composers are given such relatively short time in which to produce their scores; five or six weeks is the usual period, with four weeks to make necessary changes in the music, rehearse, and finally to translate the score to the screen.

At times, the composer is aided in his work by the Moviola, a device which is usually used at the discretion of the composer in the production of his score. When used during rehearsals, it projects on a small screen the various scenes already filmed. The composer may wish to use it during a recording session to project the entire feature from beginning to end. By viewing the picture as he conducts the orchestra, the composer can achieve maximum effectiveness in his music, strongly accenting or delicately supporting each scene in the movie. As did Alex North in *Spartacus*, composer Elmer Bernstein (no known relation to conductor Leonard Bernstein) used the Moviola while working on the music score for the Cecil B. DeMille production, *The Ten Commandments*.

When Rozsa is assigned to compose a score for a movie, he invariably goes on location with the film company, where he composes on the spot. He does the actual scoring, however, in a soundproofed room at home, using a stopwatch, and a cue-sheet

from the script. These are the best conditions, he has found, under which he can create. It might also be noted that he seldom uses a Moviola, but in no way has its absence been a handicap to him in his work, nor has it detracted from the quality of his music.

The scenes in a motion picture are not necessarily filmed in chronological sequence. The last scenes of a movie that the theatre audience will see are sometimes the first that were filmed. Movie scores are often written in much the same way. Taking into consideration the fact that Rozsa was working on *Ben Hur* for more than two years, it is not surprising that various portions of the score were written long before the actual filming of the picture was begun; and yet only months before *Ben Hur* was to have its New York premier, the score was still being completed.

Special Musical Effects—Unusual Instruments

In most cases, the primary reason for the use of special sound effects in a motion picture is to enhance the effect of authenticity. The first time this was done was in *Spellbound*, in 1946. In this case, however, the special effect that was used was purposely done so to supplement the action on the screen. Director Hitchcock asked Rozsa to compose a score that would make the theatre audience aware that the music stopped, when the music did stop. This idea resulted in the use of the *theremin*, a small, electronic instrument which produces a whining, high-pitched humming sound. The use of this unusual instrument was highly effective in *Spellbound*, and his music score for this picture won him his first Academy Award.

In *The Ten Commandments*, composer Elmer Bernstein used unusual instruments for the sake of authenticity, rather than to deliberately create any special effect. During the Exodus scene, a shofar (or ram's horn) was heard, symbolizing the slaves' freedom. Such a horn was actually used in the Exodus from Egypt thirty centuries ago. Authentic replicas of ancient Egyptian percussion instruments were used during the Egyptian dance scene, such as the tiple, Andian drum, finger cymbals and sistrum. The combination of these instruments suggested the lavishness of the Pharaoh's palace.

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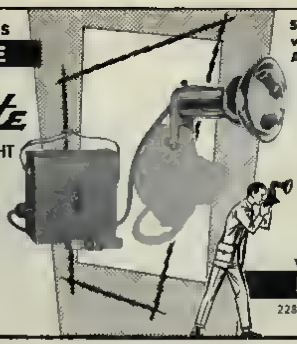

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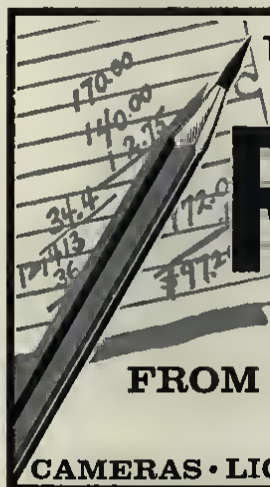

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In *Spartacus*, composer Alex North strove for a somewhat barbaric quality in his music In this case the ondioline, an electronic instrument developed in Paris, enhanced an archaic atmosphere by producing at the same time the sounds of a mandolin, piano and celesta. It was used during many of the battle scenes in the picture.

New phases of composing for the screen are continually being established, even though original film scores were being composed as early as the middle-1930's Original music was written for *King Kong* and *Gunga Din*, both of which were made in 1935. Since then film music has broadened in scope and importance A great many composers of the classical and romantic periods were represented in the films made by Universal-International during the 1930's These films used, as background music behind the action of the screen, excerpts from many well-known classics. However, the significance of modern film music has been not only to supplement the action on the screen, but to tell the same story in its own language. ■

SPACE TECHNOLOGY LABS.

Continued from Page 341

record or study, they simply call the unit, explain what they want, and the camera technicians figure out a procedure for filming it The motion picture crew often works in confined laboratories where it is impossible to bring in many lights or the big cameras. Very often the subject to be photographed is very small And it is a constant challenge to make the best films possible without interfering with the critically important work in progress.

A typical example of the vital role STL's motion picture unit plays in the company's engineering and production system is exemplified in the frequent assignments where the motion picture camera becomes a "third eye" for the observing engineers Because it is possible, when several engineers are studying an experiment in progress, for them to differ in their opinions as to what actually happened, an STL camera crew is usually on hand to record the experiment on motion picture film The resulting film is subsequently studied by the engineers—

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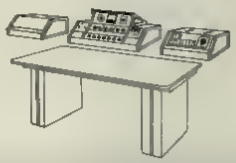

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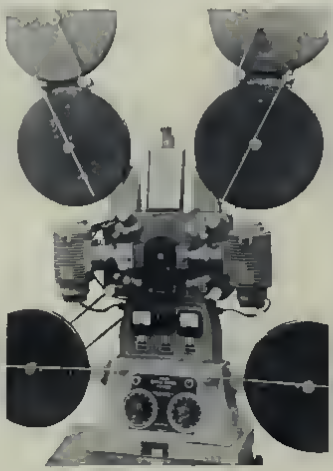

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sometimes in repeated screenings—with the invariable result that all agree on the facts of what actually occurred during the experiment. Whereas the human eye can often err, a motion picture record is both accurate and capable of re-creating a performance or experiment.

Such filming assignments always induce an undercurrent of excitement because the experiments the cameras record represent probes into the unknown—a step across the threshold into the still-mysterious depths of space. Recently, for example, it was necessary to photograph a certain operation at an altitude higher than any plane has ever flown. A high-speed camera and lights were placed inside a vacuum chamber along with the apparatus to be filmed. The STL film unit had specially adapted the camera by removing all the lubricant and installing remotely controlled tripping and timing devices. The starting of the camera had to be precisely timed because the film ran through it so fast that it might otherwise run out before the peak of the operation was reached—or, on the other hand, the operation might be over before the camera even started. Since it was impossible to modify the engi-

neer's device under study, the camera had to be modified and electrically synchronized with the operation so that it would start precisely at the right instant.

Further suspense was created by the fact that nobody had ever operated lights in such a high vacuum before and it was not known whether the lamps would explode or, perhaps, implode. When the air was evacuated from the chamber to simulate the extremely high altitude, the lamps remained intact, but the evacuated air took with it most of the moisture in the 16mm Ektachrome film, causing it to become as brittle as parchment. Nevertheless, it went through the camera without breaking or becoming fogged by static electricity and the operation was recorded with great success.

In addition to instrumentation films and progress reports, STL's film unit also shoots public relations films for various purposes. These may be short films for television, briefing films for personnel working on a project or for official visitors, or films to be shown to various organizations abroad. Two such films already have been made for showing to the German Rocket Society.

The eight key technicians in the STL film unit represent a combined total of 130 years of experience in motion picture production. Supervisor of the Motion Picture Section Harry Poppe, Jr., was a writer at M-G-M Studios before World War II. He spent the war years at the Signal Corps Photographic Center at Astoria, Long Island, and later worked on private film contracts for the Air Corps. He has written scripts for many popular television shows including "The Lone Ranger," "Sky King," "Jungle Jim," "Private Secretary," "Hawaiian Eye," and "Challenge of the Yukon."

The unit has two full-time writers who develop shooting scripts from requests submitted by other departments. Bernard Ederer, with wide experience in commercial television, is a specialist in the public relations type of script. Melvin Shaw, having had an extensive background in documentary writing, does the scripts calling for this approach. These writers also double as producer-directors, co-ordinating the overall production of their scripts.

There are two full-time film editors and two cameramen. A librarian catalogues all footage shot and maintains the film library. Two full-time projectionists are available for showings wherever needed in the complex, and they also provide projection service and equipment for STL scientists and engineers who speak before outside groups. A clerk and a secretary handle all paperwork.

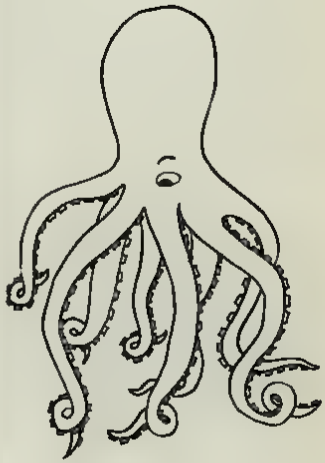
The department is equipped with Bolex Supreme, Cine-Kodak Special II, and Bell & Howell 70-DH cameras—all 16mm and motorized. Other camera equipment, such as Auricon, Mitchell, high-speed cameras and special lenses are rented as needed. The minimum amount of lip-sync shooting done in the complex is filmed with an Auricon and recorded with the unit's own 16mm Magnasync tape recorder. Five ¼-inch tape recorders (Norelco, Webcor, Revere and Berlant) are used for recording sound effects. Additional sound and recording services are sometimes supplied by Telefilm Studios in Hollywood.

STL's film unit has abundant lighting equipment including Senior and Junior Solarspots, sky-pans and small spotlight units. There is no sound stage at STL at present; therefore, lip-sync interviews with military officials or scientists are usually filmed and recorded in one of the conference rooms. The company has already outgrown its seemingly spacious quarters, and a larger complex is now under construction nearby. It is likely that this will include a sizable sound stage.

The present motion picture unit has two cutting rooms fully equipped with Moviolas, sound readers, synchronizers, hot splicers, etc. The A & B roll method is followed in cutting most of the films. A small but adequate projection room has a console in the seating area from which the entire projection operation, including focusing, can be handled by remote control.

Thus with modern equipment, ably used by experienced cinema technicians, and with subject matter to work on that is virtually "out of this world," the motion picture production activities of Space Technology Laboratories' film unit point up once more the ever-growing importance of cinematography in a rapidly changing technical and industrial world. ■

When a film is to be set up for scene-to-scene color correction, the individual scenes must be judged, not only for density (involving the total quantity of light to be used in printing), but also for color balance.



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CAR MOUNT FOR CAMERAS

Continued from Page 299

Special — is shown mounted on the spring base described above. A specially-converted Bolex H-16 with a motor-driven zoom lens attached is mounted low on the front of the car on a platform bolted to the car bumper. Adequate shock absorption is provided by inserting double-compression springs between the vertical member of the mount and the bumper, and over the bolts. The latter are tightened just enough to maintain a flexible, yet semi-rigid platform for the camera. Forward and backward oscillation is prevented by means of a chain yolk extending from the flat camera base upward toward the hood ornament, from which extends a heavy rubber band that supports the chain.

A third camera is mounted on the car roof. Like the others, it has been provided with a cushioning device that effectively damps any vibrations caused by the car while in motion.

All three cameras are electric motor driven by current supplied from batteries carried in the car. A switching panel mounted on the dashboard permits the driver-cameraman to stop or start any individual camera or all three simultaneously.

For the cinematographer who would use this or similar equipment for filming from a moving automobile, some suggestions are in order: Shooting at 32 fps, using a wide-angle lens, will give best results. The slightly increased film speed will tend to minimize any effect of unwanted car motion in the shots, and the wide angle lens further contributes in a similar way. Also, the driver of the car should avoid rapid acceleration or braking of the car to prevent camera sway or pitch—possible in extreme cases despite the safeguards incorporated into the equipment described. ■

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NEW KODACHROME FILM

Continued from Page 295

visual improvement will be. But even inexpensive equipment will make better pictures because of these film improvements."

The grain size of Kodachrome II, Eastman Kodak points out, is smaller than that of regular Kodachrome, and the grain pattern itself is less conspicuous. Also, Kodachrome II is somewhat less contrasty than regular Kodachrome. You get softer gradation without sacrifice of color saturation. Shadow areas are softer and more "open," and dark areas don't go dark so fast with underexposure. Generally, bright colors are more saturated and pastel colors are greatly improved. Reds in particular are more brilliant. Greens are more saturated, and yellows appear less orange and more pleasing.

Chart Shows Exposures

The accompanying chart shows recommended lens settings for a number of typical scenes or subjects under tungsten illumination. Those who own electric eye cameras will find the information of value to them also. Most of the cameras having built-in exposure meters will give quite satisfactory results under normal daylight conditions outdoors. But when the scene is predominantly low-level or consists of large light or dark areas, an exposure meter or an electric-eye camera will give a satisfactory exposure reading where a reading of the principal subject can be made close up. In most cases this is impossible, especially when shooting an ice show, a stage performance, a colorful neon sign display, etc. The exposure data contained in the chart covers most of the subject material of this type which 8mm and 16mm camera owners may now shoot.

Calvin Productions, Inc., of Kansas City, Missouri, always among the first to explore new materials and techniques applicable to professional 16mm film production, have tested and evaluated Kodachrome II and rendered some opinions in the March issue of *The Aperture*, the company's workshop publication for 16mm film producers.

"Comparing Kodachrome II with Outdoor or Type A Kodachrome is strictly a 'no contest' endeavor," according to the Calvin report. "Kodachrome II is fantastically improved over the older Kodachrome films. The biggest improvement is in sharpness. There is also improvement in grain characteristics, color and latitude—especially in shadow definition.

"How does Kodachrome II compare with Ektachrome Commercial where prints are needed? Any improvement in 16mm sharpness is always interesting. The higher contrast of Kodachrome II, however, might be a disadvantage in prints. Frankly, our conclusions are based on preliminary tests only of a number of rolls. We would like to run a more sophisticated series of tests before going out on a limb with any blanket recommendations.

"However, this is what the tests we have made to date show: Prints from Kodachrome II are very sharp—probably sharper than those obtained from Ektachrome Commercial. The colors reproduce well; there is wide latitude. The contrast ratio in prints is slightly higher than from ECO originals. We like the Outdoor Type II prints at least as well as the Ektachrome Commercial prints. We like the ECO prints a little better than the prints from Kodachrome II Type A. There hasn't been much difference in the prints from Kodachrome II or the Ektachrome Commercial originals in our tests under controlled conditions of photography.

"We have noticed one disturbing item—at least it's disturbing to film duplicating laboratories—and that is the new film duplicates under quite different printing filter conditions than ECO originals. This condition will require rather drastic scene-to-scene color correction where Kodachrome II and Ecktachrome Commercial scenes are intercut. Because of this, we strongly recommend that Kodachrome II originals *not* be intermixed with other films stocks.

"For outdoor or nature photographers," the Calvin report concludes, "this new film does look very promising right now. For average commercial work, we want to see more tests before we get too optimistic."

The foregoing report by Calvin is extremely interesting, but it should be emphasized here that Kodachrome Type II color film was designed especially for the amateur movie maker and is considered by Eastman Kodak an amateur film, not intended for com-

mercial use where duplicate prints are required. For general needs in the commercial field, Eastman Kodak points out, it supplies 16mm Kodachrome Commercial film which was designed especially for commercial film production.

In the meantime, others beside Calvin have explored the possibilities of Kodachrome II for commercial purposes and have come up with some interesting results So interesting, in fact, that Kodak reportedly now is conducting new and broader laboratory tests on the duplicating qualities of the film

It will be remembered that initially Kodachrome was introduced as strictly an amateur film Then, as today, inquisitive minds experimented with the film and very soon it was being widely used for many commercial motion picture needs This led Kodak to develop still newer and better 8mm and 16mm color films — of which Kodachrome Type II is the latest ■

FILMING "PARRISH"

Continued from Page 268

been impossible to shoot the long shots under the conditions that prevailed.

A rather lengthy scene in the same sequence, involving considerable dialog between two of the characters, takes place in the wheelhouse of the ferry Ordinarily such a scene would be filmed in the studio in a matching set constructed against a process screen or painted background. But in this case the scene was actually filmed in the five-foot square wheelhouse on location. Because of the close quarters (barely large enough for the two actors) the camera and crew had to stay outside in the rain and the camera's extreme wide-angle lens was poked through the doorway. The wheelhouse was mostly glass and the actors had to play against a backdrop of bright daylight. The problem here was to boost the level of the keylight on the players to match that of the daylight. This was done by using two Seniors for keylight, each fitted with a Macbeth CT filter.

A similar low-level light situation prevailed during the filming of a sequence at Majestic Seaport, Conn., a reconstructed 19th Century whaling village which attracts some 300,000 visitors each year and which has never

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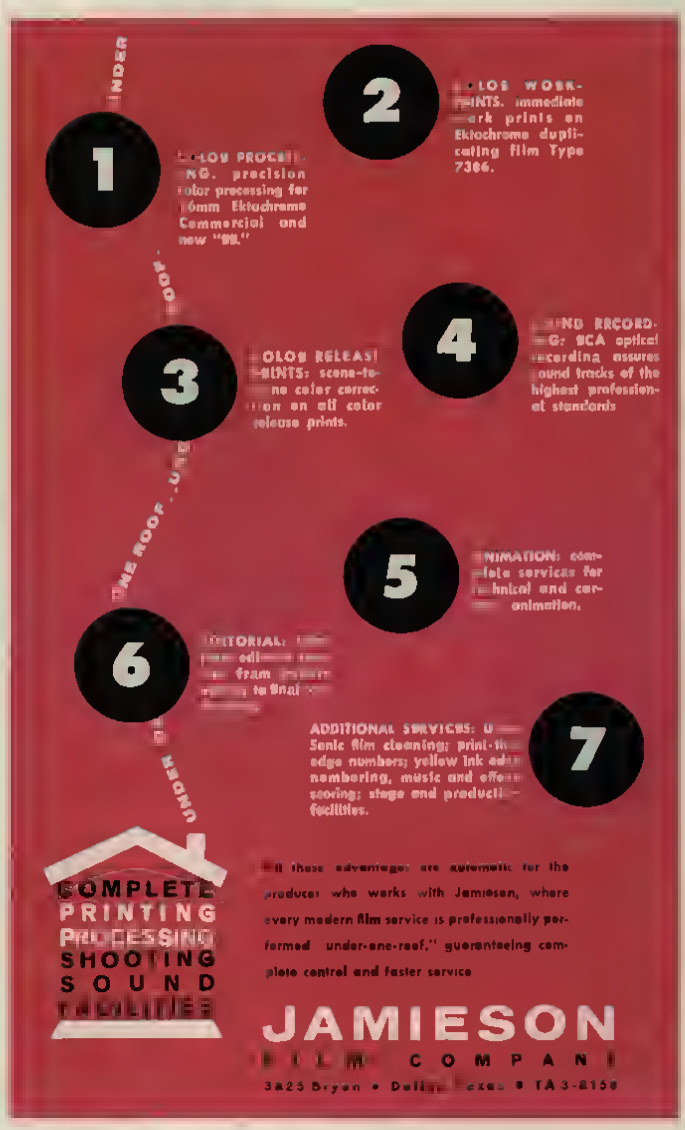

before been made available to a motion picture company. It was necessary to shoot before the tourists swarmed in, however, which meant that the cameras had to be ready to turn as soon as there was sufficient light—about 5 o'clock in the morning. The resultant scenes of fog-draped sailing vessels lying at ghostly anchor in the harbor have the poetic beauty of a mood-haunted oil painting. Stradling, however, disclaims any credit for the artistic result. "This was God's photography," he says, and seems quite content to let it go at that.

"Parrish" is the story of a boy in his late teens who, untouched of life, comes to Tobacco Valley and stays to be caught up in a maelstrom of passionate rivalries and conflicts peculiar to the area and its industry. He learns about life and love from three different girls, each of whom desires him in her own special way. Out of this crucible he emerges as a man—tempered, strong and resolute.

The camera concentrates on several attractive young people in the cast whom Stradling has photographed with such artistry that they seem to have a dewy, just-out-of-the-chrysalis quality that is exactly in key with the dramatic undercurrrents of the story. His magnificent closeups, especially of photogenic newcomer Diane McBain, are individual works of art Of this young actress, Stradling (a man not given to random compliments) says: "She is a cameraman's delight—the most perfect face I've photographed since Hedy Lamarr and Vivian Leigh first appeared in pictures."

The film's striking closeups are the result of artful lighting combined with the adroit use of diffusion filters. In a period when many cameramen concentrate on sharpnesss to the point of crisply delineating every pore in a star's face, Stradling is a firm believer in diffusion to make the actors look their best as well as to enhance subtle story values

In big closeups he uses heavy diffusion created by the M.P A filter. which has a clear center and concentric rings fanning out toward the edges. This filter, when correctly centered, permits the eyes to remain sharp while effectively softening the rest of the face It requires the attention of an efficient assistant cameraman, however, because if the focus is just a few inches off, the effect will be ruined.

As the camera worked farther back from the players, screens of correspondingly less diffusion were used. For dolly shots to or away from a closeup, a sliding diffusion screeen was employed This is a filter 12-inches long and three-inches wide with the diffusion graduated from zero to heavy. As the camera pushed in or pulled back, the filter was manipulated, either by hand or mechamically, to vary the diffusion in synchronization with the movement of the camera.

Several scenes were photographed showing field hands at work beneath the white fabric which covered the fields. The faces of the actors appearing in these scenes were softly modeled by the diffused sunlight filtering through the gauze, and they were purposly photographed without aid of booster arcs in order to preserve the delicate aura created by this kind of diffused lighting.

In one sequence the camera, mounted on a Chapman boom, begins the scene underneath the canopy and then soars over and above it, making it necessary to cut down the exposure from that established for the diffused light area to the lower exposure required as the camera emerged into bright sunlight. This was accomplished by gradually reducing the variable shutter opening of the Mitchell as it soared upward on the boom into full sunlight

When shooting in bright sunlight. Stradling invariably used a 25% or 50% Neutral Density filter in front of the lens so that he could work at a wider aperture. He believes that when shooting in color, stopping the lens down too far tends to produce a harsh quality because it increases contrast

One sequence filmed on location called for an actor to enter a huge tobacco shed and then go clambering up into the tobacco drying racks high above the floor. The shed was open at the bottom, admitting natural light, but the upper part of the shed with its maze of drying racks was black as the pit So arc lights were brought in to pour light into the high reaches of the "set." The problem here was to find adequate space for the lights between the closely arranged racks without creating a criss-cross pattern of shadows on the actor. To soften the few shadows that were unavoidable, heavy silk diffusion scrims were mounted in front of the arcs.

Power for the lights and other equipment used on location was provided by two 1500-amp. generators shipped from New York The generators were necessarily located a considerable distance from the shooting area, usually behind a building, so that the noise of their operation would not be picked up on the sound track

Exterior scenes involving actor Troy Donohue and portraying him during his tour of duty as a sailor were shot by second-unit cameraman Gayne Rescher, ASC, at the U.S. Navy Atlantic Fleet Submarine Base at Groton, Conn. Stradling filmed the submarine interior scenes inside the submarine USS Sea Robin—and, again, close quarters provided a number of problems. The available space was so small that 500-watt Baby spots and photofloods had to be concealed behind the machinery to provide effective photographic illumination. After each scene was lighted and the focus set, the crew vacated the submarine, since there was scarcely enough room below for the actors, director and camera operator during actual filming.

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quence in the picture is the holocaust which results when the worthless son of a tobacco typcoon sets fire to the gauze canopy covering the fields of a rival farmer. The flaming gauze and burning tobacco sheds form a veritable sea of fire.

This entire sequence, including closeups of the players, was photographd in the actual location. The fire department of Windsor, Conn., was called in to help contain the fire and keep it from getting out of hand. State troopers were stationed over a wide area to keep the roads clear and hold back the crowds of curious spectators who swarmed in from miles around, attracted by the fire.

Since this was clearly a "one-take" situation that allowed for no rehearsals, four cameras were set up to photograph the action simultaneously—one mounted up high, two in stationery positions on the ground, and one on the Chapman boom for moving-camera shots. Actors in the long shots which showed the fire in the background were allowed to go almost into silhouette with just a bit of rim-lighting provided by the lamps to simulate glow.

Reverse angles and closeups of the actors were filmed on the spot. Colored gelatin filters were mounted on the

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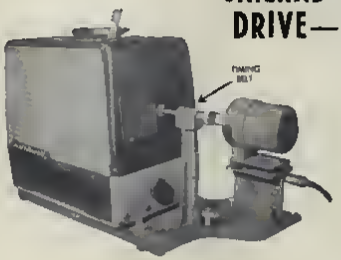

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FILMING "PARRISH"

Continued from Preceding Page

lamps so the light would precisely match the color and intensity of the actual fire. To simulate the flickering of flames on the players' faces a flaming kerosene-soaked torch was held in front of the key light, the flame and the smoke created the desired effect of flicker. The moving boom-mounted camera followed the actors (or their doubles) into the flames, giving the audience a subjectively close view of the inferno.

For Harry Stradling, Sr., "Parrish" is the latest in a long line of distinguished productions which he has photographed during his 43 years behind the camera. Starting in the film industry at the age of 16, he has had a colorful career, which includes ten years as Director of Photography in London, Rome and Paris. The European film for which he has won the most acclaim is the French classic farce, "Carnival in Flanders," which he photographed in Paris.

Recipient of nine Academy nominations to date, he won the coveted Oscar in 1945 for black-and-white photography of M-G-M's "Picture of Dorian Grey." Currently at work at Warner Bros. shooting "A Majority of One," starring Rosalind Russell (whom he last photographed in "Auntie Mame") and Sir Alec Guiness, he is still the most energetic and professionally curious technician on the set.

"I'm still learning," he says, "and I always will be. I learn something new on every picture I photograph—because to me each picture is a new experience and a new challenge." ■

FILM IMPROVEMENT

Continued from Page 299

in photographing a motion picture. These film improvement trends and their results can be traced in the following manner:

Around 1925 a new and faster negative film was introduced, (Eastman Par Speed Cine Negative Film) which, along with the new panchromatic films, increased speeds tremendously. Around this same time, new fine-grain developers were marketed, resulting in the creation of better quality motion pictures. The new, faster films which resulted in higher quality prints gave directors an opportunity to do their first serious on-location shooting and thereby broadened the base of what Hollywood film makers could do.

By the early 1930's the "wrinkles" were ironed out of old films and new, faster ones, were marketed. Improved quality and added realism made possible by more on-location scenes stimulated the desire for motion picture entertainment.

In the late 1930's three major black-and-white film developments by the Eastman Kodak Company provided further improvements. These films were Eastman Background-X, Plus-X and Super-XX Panchromatic 35mm Negative Films.

With the introduction of Tri-X Panchromatic Negative Film in 1954, the film industry had in hand a material representing a still further improvement in sensitivity that made it possible to shoot motion pictures under extremely low-light levels. This gave the industry a tremendous boost toward ultimate realism, as scenes staged outdoors at night and in closed darkened areas could be effectively reproduced on film without extensive artificial light. It is therefore not difficult to see how advanced film technology has actually increased the scope of the motion picture entertainment industry.

Even with the marketing of Tri-X Negative film, research and development in the black-and-white motion picture field continued at a rapid pace. This program saw the marketing of Eastman Double-X Panchromatic Negative Film, Type 5222 in 1960 as the latest example.

In analyzing the black-and-white motion picture film field, one finds that there is one item that has remained comparatively unchanged during the many years of development, and that is the price of these films. Today producers are paying approximately the same price for film they did when safety negative film was first marketed more than 35 years ago, despite significant devaluation of the dollar. The price of safety positive film has actually been considerably reduced.

When introduced in 1925, a 1,000-foot roll of Eastman 35mm safety negative film cost the producer $50, approximately the same price that he is paying today. Carrying the comparison even further, today's price is also equal to the first recorded price of Eastman black-and-white negative (nitrate-type

Continued on Page 318

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FILM IMPROVEMENT

Continued from Page 316

base) when the product was introduced in 1906

Comparing the price of positive films, the producer today finds that he has a financial advantage over his predecessors The 1,000-ft. roll of 35mm safety-positive film selling for $16 today can be favorably compared pricewise to the first safety positive film marketed in 1917 at $50 for 1,000 feet, or to the $35 cost for that amount of positive nitrate base film when it was first introduced in 1908.

Of course, there have been numerous other developments that have increased the value of black-and-white motion picture film. These developments along with the introduction of safety positive film in 1917 and safety negative in 1925, were marked by the perfection of sound during the early 1930's and, later, the discontinuing of all nitrate base films in 1951

It is interesting to note that, at a time when color motion picture film seems to be growing into maturity, its black-and-white older brother is moving forward at a faster pace than ever. Black-and-white 35mm film—a cornerstone in the building of the Hollywood entertainment industry—is still providing producers with a modern quality tool at an old-fashioned price. If we can say that its history has been illustrious, by qualitative comparison to the past it would seem that an even brighter future is just over the horizon. ■

OSCAR WINNERS

Continued from Page 296

fused with murky light of a slightly warm hue, suggesting no direct light source but rather a densely diffused spill light filtering in through the grates in the ceilings of the cells

Metty is said to be one of the first Hollywood cinematographers to risk a high contrast ratio in lighting for a color production, although this technique has by now become fairly standard practice.

For Metty, "Spartacus" was the culmination of a 15-year tenure as director of photography at Universal-International Studios where, originally, he started to work on a temporary basis. He has been at that studio ever since and has photographed some of its biggest hits.

Freddie Francis' black-and-white photography of "Sons and Lovers" has unusual visual beauty and is marked by photographic ingenuity throughout that easily makes it one of the finest monochrome photographic achievements to come along in a long time Not much is known in America about Francis' cinematographic work, but it's a good bet that, on the basis of his "Sons and Lovers" achievement, his name will henceforth grace the credits of more and more British productions

As is customary annually, ten major motion picture feature productions of 1960 were nominated for cinematography awards by the Academy membership. The eight directors of photography who also were in the running with Metty and Francis each have been presented with Nomination Certificates by the Academy, and these are considered no small award in themselves — something like being named one of the ten best.

The eight cinematographers who had pictures nominated for cinematography awards this year, but who were out of the running, are:

Joseph LaShelle, ASC, "The Apartment" (B&W).

Charles B Lang, Jr, ASC, "The Facts of Life" (B&W).

Ernest Laszlo, ASC, "Inherit The Wind (B&W).

John L Russell, ASC, (Psycho" (B&W).

William H. Clothier, "The Alamo" (Color).

Joseph Ruttenberg, ASC, "Butterfield 8" (Color)

Sam Leavitt, ASC, "Exodus" (Color).

Joseph MacDonald, ASC, "Pepe" (Color).

Other major awards presented by the Academy this year were:

Best Motion Picture: "The Apartment," United Artists

Best Actor: Burt Lancaster in "Elmer Gantry," United Artists.

Best Actress: Elizabeth Taylor in "Butterfield 8," MGM.

Best Supporting Actor: Peter Ustinov in "Spartacus," U-I.

Best Supporting Actress: Shirley Jones in "Elmer Gantry."

Best Direction: Billy Wilder for

"The Apartment."

Best Screenplay: "Elmer Gantry."

Best Original Story and Screenplay: "The Apartment."

Best Art Direction of a Black-and-White Production: "The Apartment."

Best Art Direction of a Color Production: "Spartacus."

Best Film Editing: "The Apartment."

Best Sound: "The Alamo," Samuel Goldwyn Studio Sound Dept.

Best Special Effects (Visual): "The Time Machine," MGM.

There were four Technical and Scientific Awards presented this year. A Class II Award was given to Ampex Professional Products Co for the production of a well-engineered multi-purpose sound system combining high standards of quality with convenience of control, dependable operation and simplified emergency provisions.

Class II Awards were presented to Columbia Studio's camera department for a camera flicker indicating device; to 20th Century-Fox's mechanical effects department for design and construction of a miniature flak gun and ammunition; and to Consolidated Film Industries for developing an automatic developer replenisher system. •

SET LIGHTING

Continued from Page 301

A—Yes, we work continually with the stand-ins until the set lighting is completed. As they move about the set—just as the actors will when it comes time to shoot—we refine the lighting further by putting up a cutter here, a gobo there—noting the requirements for these lighting adjustments as the stand-ins walk from position to position. Sometimes it is necessary to add another lamp to provide a continuation of illumination at some point. Where a set is given general lighting, the object is to maintain a consistency of illumination throughout the actors' scope of movement on the set.

Q—How do you establish what the source light shall be?

A—Essentially, this is determined by the story and particularly by the action or the scene itself. Where the light source is obvious, then our lighting must conform with it. In other words, if there is a large window through which sunlight comes and lights the players, the set is lit to simulate the sunlight illumination. If the set is obviously lit by an overhead chandelier or other lighting fixtures, the set is lit from overhead to provide a similar pattern of illumination.

Q—We have not touched on the cross light yet. What is the function of this light and where is it usually placed?

A—A cross-light is actually a key light striking the player from the side instead of straight on. Like any other key light, it is usually mounted high but at one side of the set. Cross light is used for a number of reasons—one of them already explained above where two players face each other on the set. Sometimes the source light is supposed to come from the side instead of from the front or directly overhead, or where a player is to move from one side of the set to the other so that the main key light will be ineffective at the conclusion of his movement.

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Then a cross-light can be set to provide a continuation of the basic key light illumination.

A three-quarter-cross back-light should throw the player's shadow before him—not directly in front of him, but ahead and a little to one side

***Q*—Thus far we have been discussing key, fill and cross lights as used for a long or medium shot that takes in a full set. Now what about lighting a player for a close-up—how is the key light set for a closeup or a two-shot?**

A—If the player is a girl, then the lighting must first of all enhance her beauty. And if you are lighting her for the first time, it becomes necessary to take time to study her and also what effect light coming from various angles has on her. Normally, I would place the key light directly above the camera on a stand, then move it slowly around to the right and then to the left and study the effect on the girl. No fill light would be used—just the key. I usually try to put the nose shadow down and just above the corner of the mouth, so the tip of the nose falls above the corner of the mouth. This is portraiture technique

***Q*—To what extent do the basics of portraiture lighting play a part in cinematography.**

A—I think they apply all through it When you move in close to photograph a person—a man or a woman—portraiture techniques determine the success of the shot This is why a cinematographer with portrait experience has certain advantages. Just because he's using a movie camera doesn't make any difference. The objective is the same. The work of such cinematographers as Joseph Ruttenberg, Arthur Edeson, and Charles Rosher has always been marked by outstanding and artistic photography in the closeups All were portrait photographers before they became cinematographers. Incidentally, I think it would be well to point out here that the lighting of various motion picture stars is an intensely individualized matter varying not only with the technique of the individual director of photography but with the requirements of each individual star.

***Q*—Would you describe the set lamps that are used today for the following purposes: key light, cross light, back light, fill light, and eye light?**

A—Well, let's take the Mole-Richardson line of equipment, which is most generally used in all the major studios For a black-and-white production that is to be given normal lighting, one or more Juniors, which take either 1000—or 2000-watt globes, are adequate for the key light. As I have already pointed out, a single Junior suffices as a key light where the lamp to subject distance ranges between 20 and 30 feet.

The lamps used for cross light and back light depend upon the situation at hand, and may vary from a baby spot to a Senior. which takes a 5000-watt globe, or an even larger lamp.

Single and double broads on floor stands are most often used for fill light. The single broad takes bulbs ranging from 500- to 1500-watts, thus providing a wide range of intensity. The double broad doubles the intensity of the single, taking as it does two lamps instead of one—hence its name.

For an eye light, a cinematographer can use almost anything luminous. Probably the most commonly used eye light is a small spot light, such as Mole-Richardson's "Midget," which accommodates bulbs ranging from 50- to 200-watts.

The M-R Baby Solarspot (500 to 750 watts) not heretofore mentioned, the Junior (1000 or 2000 watts), the Senior (5000-watts) and the Tener (10,000-watts) all provide for focusing and flooding the light beam Also, each of these units is fitted with a Fresnel lens.

***Q*—Has the introduction of faster film emulsions changed set lighting procedures in any way?**

A—No, faster films have not resulted in using fewer lights on the set. On the contrary, the usual number of lighting units are used, and directors of photography are applying the advantages of faster film speeds in another way—to work at a smaller lens aperture to gain increased depth of field, or to work with lamps of lower wattage which lower the illumination level and make for cooler working conditions on the set

In Hollywood film production, most directors of photography work for a pre-determined light level or foot candle rating in lighting sets Interiors are lighted at an incident light level that provides the desired f/ stop for the particular film that is to be used. ■

NOTE: Coming, in a subsequent issue, a comprehensive article on the techniques of lighting sets for color photography—Editor

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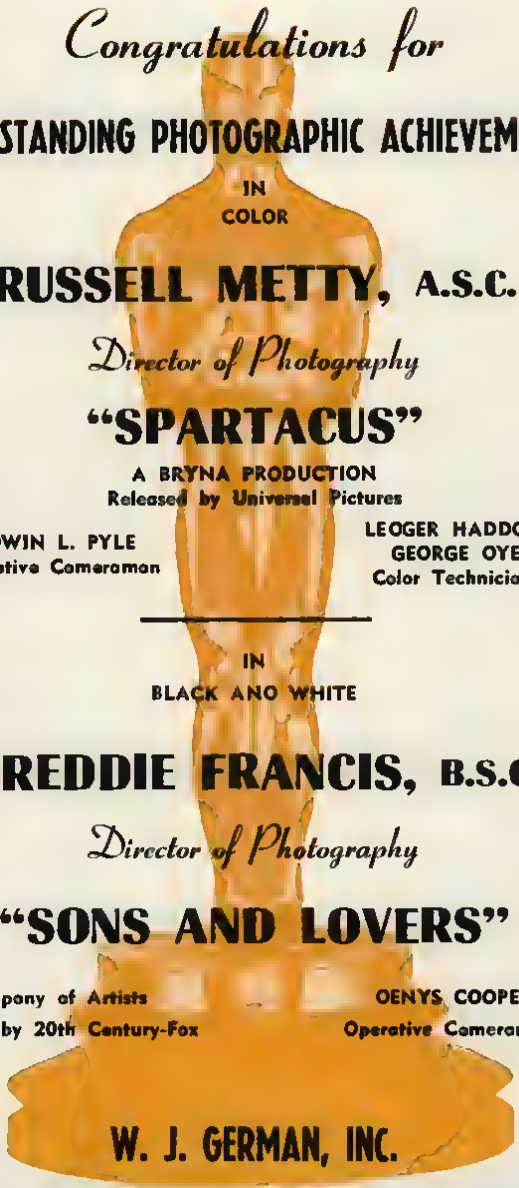

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